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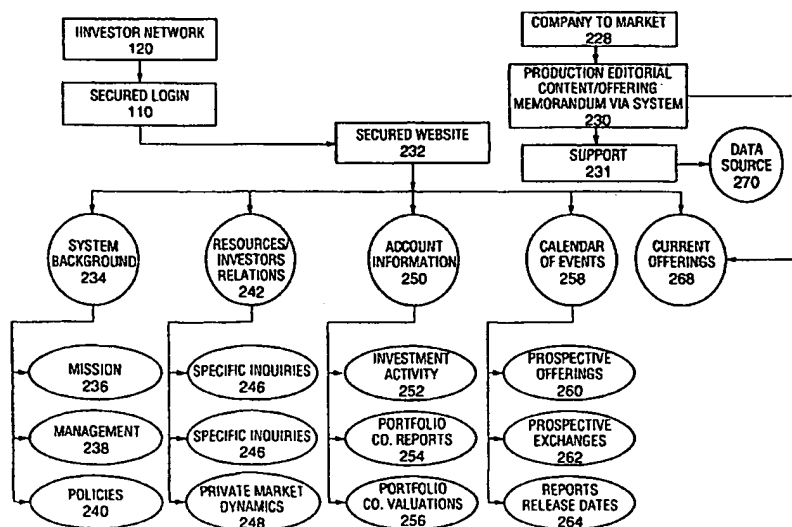
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(54) Title: INTEGRATED CAPITAL MARKET SYSTEM FOR SMALL ISSUERS, INCLUDING AUCTION



(57) Abstract

A fully integrated market system and method for raising capital for business firms through an on-line network of self-directed accredited investors. The system and method allow prospective investors to access via the Internet a menu of investment opportunities in the unregistered securities, while assisting such investors' investment decision making, price setting via an auction process, transaction execution, and risk management by providing a suite of standardized analyses and financial and managerial reports, conveyed on-line on a periodic basis. Additionally, the system and method provide the establishment and support of a secondary market, wherein such unregistered securities are priced and traded.

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**INTEGRATED CAPITAL MARKET SYSTEM FOR SMALL ISSUERS,  
INCLUDING AUCTION**

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**RELATED APPLICATIONS**

30        This application claims the benefit of U.S. Provisional Application No. 60/122,144, filed  
February 26, 1999, and entitled "Integrated Capital Market System For Small Issuers."  
Application No. 60/122,144 is hereby incorporated herein by reference. This application further  
claims the benefit of U.S. Application No. 09/275,571, filed March 24, 1999, and entitled  
"Integrated Capital Market System For Small Issuers." Application No. 09/275,571 is hereby  
35        incorporated herein by reference. This application further claims the benefit of U.S. Provisional  
Application No. 60/159,621, filed October 14, 1999, and entitled "Computerized Single-Price  
Multiple Unit Auction With Expenditure Bids." Application No. 60/159,621 is hereby  
incorporated herein by reference.

## BACKGROUND OF THE INVENTION

### Field of the Invention

The invention is a process and system for raising capital. In some embodiments, a computer network and process are used for presenting information, determining price, and  
5 executing transactions. The invention assists firms to raise capital and assists investors in buying newly issued securities and in buying and selling shares in a secondary market. These methods could be used for both public (registered with the Securities and Exchange Commission) and private (not registered with the SEC) securities. Some aspects of the system would require SEC approval for use with public securities.

### 10 The Existing Private Capital Market

The two main sources of outside equity capital for private companies are individual investors and venture capital funds. Investment banks also provide some outside equity for private firms, but they tend to handle only the very largest private transactions (typically \$30  
15 million and up) and are considerably smaller total sources than venture funds or individual investors. Venture capital is often thought of as the primary source of outside equity financing for companies seeking to grow large enough to raise capital in the public stock markets. This impression is mistaken. While venture funds have high profiles, are well organized, and play an important role in the capital formation process, the funds provided by individual investors are substantially larger than the funds raised through venture capital.

20 In addition to raising private equity, a developing firm may choose to enter the public equity market to raise capital. In so doing, it incurs the considerable costs of registering its public equity and complying with the many regulations governing public corporations. Improvements in the private capital market, especially for firms at the development rather than startup phase, would help avoid the costs of premature entry to the public equity market.

25 According to the inventors' research, (based on the Federal Reserve's 1993 National Survey of Small Business Finances and on Internal Revenue Service records) there are almost 500,000 private domestic C- corporations with 10 or more employees, in contrast to roughly 8,000 public corporations whose stocks trade on U.S. exchanges. A substantial fraction of these private companies are candidates to use our invention to raise capital or to gain the advantages of  
30 a secondary market in their shares.

### *Individual Investors*

Individual investors with significant wealth have long been the source of capital for new enterprises. The Russia Company, in 1555, was the first company to have a corporate charter in England providing for outside equity investors in a business enterprise. From that time to the

present, wealthy individuals have always been the primary source of funds for outside equity in business enterprises in which ownership was separated from management. These individual outside investors are now often called "angels."

5 In the United States today, individual investors provide, in total, twice the funds to private companies provided by venture funds (NSSBF, 1993). There are roughly 300,000 individuals who invest in private companies, and they generally invest in amounts of \$50,000 to \$200,000 per investment. Further research of the inventors (from the Survey of Consumer Finances, 1998, also conducted by the Federal Reserve) has found that there are roughly 5.7 million U.S. households with net worth in excess of \$1 million. Evidently, at this time, only a  
10 tiny fraction of eligible investors participate in the private equity market.

Individual investors tend to provide capital in smaller aggregations than do venture funds. Entrepreneurs can often raise \$1 to 2 million from their personal networks, but have trouble finding more than this. The angel capital markets are not well organized and depend mainly on personal connections. While there are a few well known "bands of angels," groups of  
15 investors that actively seek enterprises in which to invest, they are rare.

One reason for the lack of organization of the angel process is that there are legal restrictions on soliciting funds for private companies from individual investors. Generally speaking, in the United States, companies and broker/dealers are restricted by the SEC at the Federal level and by various statutes at the state level from soliciting investments in private  
20 companies from individual investors unless each investor has net assets of more than \$1 million. All organized private placements of equity must be filed with the SEC. Until quite recently national solicitations of private equity had to be registered in all 50 states as well. With the adoption of SEC Rule 506, Sec. D, in 1996, federal law now pre-empts the requirement for State registration for securities filed at the federal level.

## 25 ***Venture Capital***

The creation and rise of venture funds is fairly recent. The first venture capital fund, the American Research and Development Corporation, was formed in 1946. A handful of other venture funds were created in the following decade. The flow of new money into new venture funds between 1946 and 1977 never exceeded a few hundred million dollars annually.

30 In 1958, Congress passed the Small Business Investment Company Act, festooned with tax advantages, to stimulate the formation of Small Business Investment Companies (SBICs) to facilitate small business financing. The program failed to stimulate much additional investment.

Funds flowing to venture capital increased substantially during the late 1970s and early 1980s. One factor accounting for the rise was the 1979 revision of the "prudent person" rule  
35 governing pension fund investments. Prior to 1979, the Employee Retirement Income Security

Act (ERISA) inhibited pension funds from investing much money into venture capital and other high risk assets. The Department of Labor's clarification of the prudent person rule explicitly allowed pension managers to invest in high risk assets, including venture capital, as part of a diversified portfolio. In 1978, individuals accounted for 32 percent, the largest share, of the total  
5 \$424 million in new venture funds. Pension funds supplied only 15 percent. Eight years later, pension funds accounted for more than half of the more than \$4 billion in contributions. There was another leap in venture capital activity in 1996 and 1997.

Venture funds will finance early stage companies with no tangible assets as well as more mature private companies with customers and revenues. Venture funds often monitor the  
10 managers of their companies intensively, require representation on the board of directors of the companies in which they invest, and structure their interest as preferred stock with restrictive covenants in order to protect their interests. Venture capitalists provide a high level of service to the firms they finance, and charge high prices accordingly. The minimum cost to the startup firm for venture capital financing is 20 percent of the investment (in the form of an equity interest  
15 given to the venture capitalists) and in many cases the cost is even higher.

The emergence of an extraordinary number of new business opportunities as a result of the fast growing use of the Internet has provoked an increase in the size of investments made by fund managers. The average venture capital investment rose from \$2.3 million in 1990 to \$6.8 million in 1997. (data from Venture One, San Francisco, California).

## 20 ***Public Offerings***

The public markets are an option for raising capital only for larger companies for two reasons. First, there are substantial fixed costs to creating, filing, and distributing a registered security. Second, once filed, the security must attract sufficient trading interest to maintain a secondary market for the security. This precludes many companies from accessing the public  
25 securities markets.

## ***Investment Banks***

Traditional investment banks play a limited role in raising private capital. They usually enter the process near the time a developing firm makes its Initial Public Offering or IPO.

## ***New Institutions***

30 Garage.com is a new, Internet-based organization intended to support firms in the startup phase. It performs partly as a Venture fund and partly as a matchmaker for institutions and angels interested in investing in firms with ideas but without products producing revenue. Garage.com does not provide standardized, verified financial or other information about potential investments, nor does it provide any mechanism for pricing or distributing shares in them.

AngelTips.com operates mainly as a matching service. Neither of these web sites operates a market in private equity capital.

### **The Problem and the Solution**

Developing firms lack access to equity investors in an important way. They can scout on their own for angels, but this is unlikely to yield more than one or two million dollars of funds. At an early stage, they can deal with venture capitalists, which means ceding considerable control to them and paying 20 percent or more for the funds. They can try to reach investors through traditional investment banks, but these banks are not active in the process. Or they can go public prematurely.

Our invention provides the solution to this problem. It permits a developing firm to offer equity investments to investors all over the country and, indeed, all over the world. The use of the Internet and the computer results in a dramatic reduction in cost and therefore in fees relative to venture capital or traditional investment banks. Firms gain the advantages of the public equity market without incurring the costs of participating in that market. A primary advantage is the possibility of a secondary market, where investors can buy and sell shares when the issuing firm is not selling shares. Today, there is no functional secondary market in private equity. Firms incur the costs of entering the public market to gain that advantage. Our invention provides an economically attractive alternative.

Our invention is an advance over existing methods for raising private equity in another important way, relating to the determination of the selling price of the equity. In the existing methods, the price is determined through negotiation (in the case of venture financing) or is set by the issuing firm (in the cases of angel investing or traditional investment banking). The price is not influenced directly by the amount of investor interest. As a result, there can be shortages of equity when investors wish to purchase more shares at the stated price than the issuing firm chooses to make available. The same problem arises frequently in IPOs. Investors clamor for access to desirable IPO shares.

We solve this problem by using the principle of the market. Specifically, we have invented an auction process suited to the sale of private equity. The process determines the price at the initial offering that equates investor interest to the number of shares offered by the issuer. The same auction process provides a secondary market that finds the price where selling interest equals buying interest.

### **Systems Used outside of Private Capital Markets**

Our system builds on principles used in other markets. In particular, we make use of the time-tested principle of the auction, which has evolved over many centuries of use. The type of

auction relevant for securities such as private equity is the single-price auction, where the auction process finds one price that governs transactions in many shares. In the stock market, where there are many sellers as well as many buyers, the term "single-price call auction" is used for the type of auction used in our invention. Sometimes this type of auction is called a "Dutch auction,"  
5 although that term also applies to an auction for a single object where the auctioneer announces lower and lower prices until a bidder accepts the price.

The Arizona Stock Exchange (AZX) runs a single price call auction in securities listed on various national exchanges. This system is available to institutional traders only. AZX takes firm bids from investors to buy and sell shares, and uses these bids to find a price that equates  
10 buying and selling interest across all participants. The AZX system has the following characteristics (1) all investors can see all of the aggregated bids and offers, but cannot see individual bids and offers, and thus cannot tell whether any particular segment of demand or supply represents a single customer order or a number of orders, (2) a fixed closing time, (3) all bids at market price or better are ranked by time alone to determine which ones are filled—a late-  
15 entered purchase bid may not fill even if it is priced better than market.

W.R. Hambrecht has introduced a Dutch auction for registered securities sold in an initial public offering. Hambrecht's system has been used only for public offerings registered with the SEC. The Hambrecht system is entirely sealed bid, with no price or volume of trading feedback during the auction. Hambrecht's auction also has a precise ending time with no  
20 extensions to allow bidders who are outbid to return and bid higher. Hambrecht posts only an offering memorandum, with no hypertext, on the Internet. No other information relevant to the issue is posted.

Single-price call auctions are used four times a day in the Tokyo stock exchange, at the open and close of the morning and afternoon trading sessions. More than half of the total trading  
25 volume in the exchange occurs in the auctions. Only professional traders are permitted to participate—retail customers can take advantage of the auctions only by placing orders with brokers. Information about bids is available to bidders during the auction process and the auction ends at a fixed time.

When an auction has a fixed ending time, bidders will try to place their bids at the very  
30 last second, in order to keep their interest secret from other bidders. The result is undesirable for two reasons: First, it denies the other bidders valuable information about the total amount of interest in an issue. Second, it creates congestion and disputes about whether a bid arrived in time or not. These problems occur in the Tokyo securities auctions and in auctions at eBay.com for other goods and services. The traditional solution to this problem is to have a period of "going,  
35 going, gone" during which a bidder forced out by a late bid has a chance to raise her bid. The auction ends after a period of minutes or hours during which no bid is made. Every bidder has an



equal chance to be the last bidder. This type of auction extension is used in some Internet auctions, such as Winebid.com, but we are not aware of its use in securities auctions. Our invention includes an improvement upon the auction extension suited to securities auctions.

The U.S. Treasury operates single-price auctions when it issues new debt instruments.

- 5 No information is provided to bidders as bids accumulate—the auction is strictly sealed bid, closed book. This auction format is appropriate for government debt markets, but not for private equity, where bidders gain from learning about the trading interests of others.

- 10 In a securities auction, bidders wishing to purchase shares must formulate their bids without knowing what the price will be, since the price is determined from their bids along with all other bids. In all auctions known to us, the bidder must commit to accepting a stated number of units or shares, if the bid is accepted. As a result, the bidder is uncertain as to the number of dollars that she will have to pay if the bid is successful. We have invented a new bid process, where a purchaser can state a bid in terms of the number of dollars to be invested. So far as we know, this process is original to us.

- 15 So far as the inventors know, no one has used any of the following features in selling new offerings of securities:

1. Posting of all relevant documents, with appropriate hypertext incorporated, on any global communications network.
2. Any formal auction process that involves revelation of price and volume of trading  
20 during the auction, or that incorporates extension periods to allow bidders who are outbid to re-bid.
3. Use of a global communications process to provide continuing reporting to investors.

In addition, the inventors are not aware that anyone has ever operated a periodic secondary market for private equity securities.

## 25 SUMMARY OF INVENTION

- Accordingly, it is the object of this invention to provide a new and comprehensive process and system to facilitate capital formation, utilizing the Internet as the primary vehicle for the dissemination of information and utilizing an auction to determine the price of the shares. It is a further object to provide comprehensive support to both companies seeking to raise capital  
30 (issuers) and investors seeking to deploy capital throughout the capital formation process, including consistent information disclosure subsequent to the investment, as well as providing a secondary market for the investment.

One aspect of our invention is a process that supports: (a) an initial review, analysis and structuring of transactions on behalf of issuers, which includes methods of aggregating and assembling information in order to facilitate review and analysis; (b) methods and means of disseminating relevant information to a qualified network of investors; (c) facilitation of dialog  
5 among investors and between investors and the issuer on a timely basis; (d) managing a pricing and allocation process to establish a market price and to allocate securities to investors willing to pay the market price; (e) establishing standards of required post-transaction information and disseminate such information from issuers to their investors efficiently; and (f) on a regularly scheduled basis facilitating the investor's desire to sell holdings of an issuer's securities.

10 Another aspect of the invention is an exchange offer mechanism providing a venue and method for the resale and/or refinancing of securities.

The invention provides a method and apparatus for prospective investors around the world to review, assess, participate in dialog, to communicate a binding purchase bid for investment opportunities, and to purchase primary securities offered by issuers. The invention  
15 also provides a method and apparatus for issuers to communicate, on a global basis, salient and reliable information regarding the issuer, the securities offering, its management, historical and projected managerial and financial performance, to assist investors in deciding whether to purchase some portion of the offering. Additionally, the invention provides a system to make this information available efficiently to a large number of investors.

20 Further, the invention provides investors, in an efficient and standardized fashion, a means to review and assess a far greater number of offerings than is available via existing systems. The invention is therefore a highly effective system for facilitating bilateral commerce, that is, to create a market. It improves the ability of issuers to reach investors qualified to purchase the issuer's offerings, and improves investors' ability to find offerings. It is the goal of  
25 the present invention to provide a system to connect a large numbers of qualified investors with sellers (issuers or earlier investors), and assist them in completing transactions that are significantly more efficient than those made with present means.

It is the objective of the present invention to aggregate a large number of accredited investors within the network, as such breadth improves the likelihood of the Offerings meeting  
30 with the satisfaction of a sufficient number of Investors to place an entire Offering. To raise the number of investors in the network, various marketing initiatives are deployed to inform the universe of possible investors of the investment opportunities provided by the system of the invention.

The invention provides a systematic method for accepting bids from buyers and sellers,  
35 storing the information, displaying the status of the offering, determining a tentative price and communicating it to current and prospective bidders, notifying bidders when their bids cannot be

filled without the bidder setting a more favorable price, and terminating the auction after a period when there has been no substantive bidding activity.

A particular advantage of the invention is that bidders may state their purchase bids in terms of an amount of money (e.g., the number of dollars) to be invested.

5       The invention also provides a system for distributing shares to successful bidders and collecting the corresponding funds.

The invention provides a secondary market for securities, where the owners of securities can trade with other investors using the system.

10       Further objects and advantages of our invention will become apparent from consideration of the drawings and descriptions that follow.

## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a block diagram depicting an example of an investor network and database construction portion of an embodiment of a system according to the present invention.

15       Figure 2 is a flowchart depicting an example of a process for building an investor network and database according to an embodiment of the present invention.

Figure 3 is a block diagram depicting an example of an investment database construction portion of an embodiment of a system according to the present invention.

Figure 4 is a flowchart depicting an example of a process for building an investment database according to an embodiment of the present invention.

20       Figure 5 is a block diagram depicting an example of an embodiment of a Offering Process and Investor Interface portion of a market system according to the present invention.

Figure 6 is a block diagram depicting an example of an embodiment of a Virtual Road Show portion of a market system according to the present invention.

25       Figure 7 is a block diagram depicting an example of an embodiment of a Price determination portion of a market system according to the present invention.

Figure 8 is a flow chart depicting an example of an embodiment of an Auction portion of the market system shown in Fig. 7 according to the present invention.

Figure 9 is a flow chart depicting an example of an embodiment of an Auction with four phases according to the present invention.

30       Figure 10 is a flow chart that illustrates an embodiment of a method for price determination in an auction according to the present invention.

Figure 11 is a chart showing the rules for filling bids when they specify prices equal to the auction price.

Figure 12 is a block diagram depicting an example of an embodiment of a Closing portion of a market system according to the present invention.

Figure 13 is a block diagram depicting an example of an embodiment of a Reporting portion of a market system according to the present invention.

5        Figure 14 is a block diagram depicting an example of an embodiment of an Exchange Offering Portion of a market system according to the present invention.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In a preferred embodiment of the invention, the offerings are governed by the United States Securities and Exchange Commission's Rule 506 of Regulation D of Section 4(2) of the Securities Act of 1933. This rule preempts blue sky registration in the United States, as long as the Offerings are sold to accredited investors, as defined by the United States Securities and Exchange Commission. The attributes of accredited investors include certain income and net worth levels and imply a level of sophistication or understanding regarding financial and investment matters. In this preferred embodiment of the present invention, a secure electronic network links accredited investors with each other and the system of the invention, which delivers information on behalf of issuers to the network.

The present invention is preferably embodied as a computer program developed using an object oriented language that allows the modeling of complex systems with modular objects to represent real world objects and their interrelationships. Examples of such objects would include money and corporate assets. Despite the fact that relatively abstract techniques are preferably used to implement or execute the present invention, it would be obvious to one of ordinary skill in the art that the invention as described herein can be implemented in many different ways using a wide range of programming techniques as well as general purpose hardware systems or dedicated controllers. In addition, it would be further understood by one of ordinary skill in the art that the output of the system of the present invention can be in the form of printed or electronic reports or displays that direct users or electronic components to execute further actions.

The present invention facilitates the establishment and operation of a comprehensive framework for a capital market system, enabling companies to raise capital funds from a secure, private network of accredited investors who seek to purchase the unregistered securities of the companies. More specifically, the present invention provides the processes and systems to support the market, including participant registration and accreditation, development and contents of financing memoranda and other offering materials, electronic distribution of

information to the network, an auction protocol for setting price, standardized periodic disclosure and investor reporting, and a secondary market for the shares.

### Investor Network

Fig. 1 is a block diagram illustrating the components used in the process for building an investor network 120 and an associated investor database 122. In Fig. 1 and throughout the remaining figures that are specifically identified as block diagrams, the following notational conventions are used: Rectangular shapes represent processes or systems of the invention, circular or oval shapes represent data repositories or information sources, diamond shapes represent decision points, and connecting lines ending in arrow heads represent information or control flows between the processes, systems, data repositories, information sources, and decision points in the indicated direction.

According to the present invention, the general public 100 is exposed to various marketing processes including Direct Marketing 102, Brand Building 104, and Indirect Marketing 106. As a result, the Individual Investor Universe 108 is identified and defined from among the general public 100. From within the Individual Investor Universe 108, potential investors wishing to participate in the system of the present invention provide their information to enter the Registration Process 110. As part of this process, a potential investor completes an application, which among other things, certifies that the investor is accredited in compliance with the SEC definition. The application is completed either in electronic or paper form, with an applicable signature, and is reviewed for completeness and integrity. Ultimately, a determination is made whether the applicant is accredited 114. If not, the application is rejected 112. If the applicant is approved, an Investor Profile object representative of the investor is created 118. Additionally, eligible institutional investors 116 are offered the opportunity to participate in the system and representative objects are likewise created for them 118.

In creating the Investor Profile objects an account identifier and a password are assigned to the investor's object so that the investor, individual or institutional, can access the Market system and be uniquely identified within the Market system. An investor network 120 within the Market system enables communication between the investors and the system. Cryptographic protocols and other encryption technology are used to authenticate the identity of the Investors and verify all communications between the Investor and other participants in the system.

For privacy and competitive reasons, Investors may prefer not to have their identities revealed to other Investors within the Market system. The invention protects the anonymity of Investors through the use of identification keys. The Investors' Profile objects and associated identification keys are stored in an Investor database 122 controlled and secured by a central server.

To insure that Investors are accredited at the time of a respective investment, a preferred embodiment of the present invention requires the Investors to reaffirm their status as being accredited upon each access of the Market system, before they can actually gain access. An additional feature of the invention is the ability to store Investors' preferences in the Investor database 122 as to Offering types, purchase sizes and other Investor profile information.

### Issuers

Turning to Fig. 2, a flowchart depicting an example process for using the system described in Fig. 1 is explained. In Step S1, the Individual Investor Universe is identified using various marketing processes. In Step S2, institutional investors wishing to participate in the system of the invention are identified. In Step S3, potential investors are qualified. In the preferred embodiment, an investor is deemed qualified if he or she meets the requirements of the SEC's definition of accredited discussed above. In Step S4, Investor Profile Objects are created for the qualified investors. These objects represent the investors and provide a common model having predefined parameters, for all investors to interact with the Market system of the present invention. In Step S5, the Investor Profile Objects are stored in the Investor database 122. In Step S6, Investors represented by Investor Profile Objects are given access to the system. The Investors are allowed to communicate with the system and each other via the investor network 120 within the system.

Turning to Fig. 3, a block diagram illustrating an example system for constructing an investment database according to a preferred embodiment of the present invention is depicted. One of the business objectives of the present invention is to sell Offerings of Issuers (Investments) to Investors, disseminating sufficient information to Investors to facilitate their respective purchase decisions. Before any Offering materials are disseminated, many Issuer candidates are reviewed and analyzed to identify potentially successful companies. The population of all companies 200 are exposed to extensive marketing programs 202, 204, 206, to identify the target company universe 208 of maximum size. Within the target company universe 208, a large number of Issuer candidates that enjoy a predefined set of desired characteristics are to be reviewed before any are selected to participate in the Market system of the present invention. The predefined set of desired characteristics would preferably include, but are not limited to, historical and projected revenue growth rates, quality of management team, and compelling business strategy.

In order to review the individual Issuer candidates, a significant amount of information is gathered via the apparatus of the present invention. Upon commencing the review of an Issuer candidate, the candidate is assigned an account identifier, a password, and a secure, bi-directional communications vehicle such as a Web-page identified by a unique Internet World Wide Web

Universal Resource Locator (URL) 210. Via the assigned Web-page, a Issuer candidate can submit requested information electronically. As with Investors, Issuer candidates are represented in the system of the present invention using objects. Thus, an Issuer candidate object is created 212 and stored in an Issuer database 224. The Issuer candidate objects in the Issuer database 224 are repositories for all the information gathered about the Issuer candidate by the system.

In a preferred embodiment, the invention makes use of a multi-stage information gathering process to define the Issuer candidate objects. For example, in a three stage process, a series of three proprietary templates (*e.g.* Template I, Template II, and Template III) can be used to specify the specific information needed for the system at the appropriate stage of the information gathering process.

Template I would preferably request preliminary information regarding the Issuer candidate, and is preferably presented electronically to the system of the present invention 212. Upon review for completeness and clarity, Template I would preferably be electronically distributed to a group of pre-selected individuals to assess the merits of the Issuer Candidate's basic business, to determine if the consideration of the Issuer candidate should progress further. The group of pre-selected individuals would preferably include certain Transactors, who preferably are financial and banking professionals skilled in the art of finance and securities transactions. The members of this group are called Intellectual Capital Analysts ("ICAs"). They provide commentary on the business, its model and opportunity, and its respective industry, returning such commentary electronically to the system for review 214.

If the outcome of the preliminary review 216 is unsatisfactory, the Issuer candidate is informed that it will not be permitted to participate in the system of the present invention 218 and the Issuer candidate maybe referred to another source of capital. The ICAs' assessment is based upon a review of a predefined set of desired characteristics that would preferably include, but are not limited to, historical and projected revenue growth rates, quality of management team, and whether a compelling business strategy is present.

If the outcome of the review 216 is satisfactory, the system will issue, either electronically or in paper form, a formal engagement letter 220 to the Issuer candidate for execution. The formal engagement letter preferably sets forth the terms and conditions of the services to be rendered, including the consideration to be rendered upon completion of the service. Upon receipt of the executed engagement letter from the Issuer candidate, a more formal stage of the information gathering process commences.

In this next stage, Template II would be displayed to the Issuer candidate, with such a template preferably requesting more extensive detailed information regarding the Issuer candidate 222. The information that would be included in a preferred embodiment is: corporate history, product descriptions and strategies, historical and projected financial data,

manufacturing/distribution/marketing efforts and strategies, competitive and comparative positioning, and management backgrounds. Such information would preferably be compiled by the Issuer candidate, and submitted electronically to the system, and routed into category-specific databases 224 and the appropriate Issuer candidate object.

5 Specialists skilled in the art of managing securities offerings, termed Transactors, would receive and review the information, while commencing and compiling financial and other analyses (including the findings of outside advisors, consultants, and accountants, leading to a recommended structure and pricing displayed in the form of a memorandum (Transactor Recommendation). The Transactor Recommendation would be submitted electronically to an  
10 Investment Committee for discussion and ultimately, approval 228 or declination 218.

Turning now to the flowchart depicted in Fig. 4, an example embodiment of a process using the system described with respect to Fig. 3 is explained generically. In Step S7 a target company universe is identified using various marketing processes. In Step S8, an identifier is assigned to Issuer candidates and in Step S9, Issuer candidate Objects representative of the Issuer  
15 candidates are created. In Step S10, the Issuer candidate Object is further defined and then subjected to a Preliminary Screen Process to determine if certain predefined criteria are met. In Step S11, a determination is made and if the Object lacks the desired characteristics, the Issuer candidate is referred away to another capital source in Step S16. If on the other hand, it is determined in Step S11 that the Issuer candidate Object is acceptable, an Engagement process is  
20 executed in Step S12.

The Engagement process includes further definition of the Issuer candidate Object and a commitment to a service agreement between the Issuer candidate and the system of the invention. Next in Step S13, the Issuer's candidate Object is stored in an Issuer database. A further stage of information gathering occurs in Step S14 before a decision is made by the system to bring the  
25 Issuer candidate to market. If the Issuer candidate does not receive approval, the system directs the candidate to another source of capital in Step S16. If, based on the Issuer information gathered up to this point, the system decides to approve the Issuer, the Issuer is brought forward to the market portion of the system in Step S15.

### **Offering**

30 Turning to the block diagram in Fig. 5, with the approval of the system's Investment Committee and thus the decision to take the Issuer Company to Market 228, information gathered in Template II would be used to develop the Issuer candidate's Offering Memorandum. The Offering is the set of securities to be issued by the Issuer Company. The Offering Memorandum would preferably be in the form of a standardized series of web pages, designed to  
35 convey information on the Issuer and its Offering to the Investors 230. Included Web Pages



would include a description of the Issuer's business activities, history, management, strategy, historical and projected financial information, and the terms of the Offering. The Transactors would assist the Issuer in the production and editorial process. In a preferred embodiment the drafting and revision process would occur electronically using web pages. Certain web pages  
5 would provide links to other web pages within the Memorandum in order to facilitate Investors desire to read and analyze such Memorandum information in their preferred sequence, not necessarily in the order presented. In addition, the Issuer would make available other information on separate Web pages, such as access to its own web-site and collateral materials (collectively, "Company Statement"), which would be available with the Offering Memorandum  
10 on the Issuer's Deal Page 322 discussed below.

Concurrently with the production editorial process, Template III would preferably be provided to the Issuer. In Template III, the Issuer is preferably requested to provide additional support documentation and information, as well as assert certain selected disclaimers and representations provided by the Transactors regarding the Offering. This additional information  
15 is intended for the Investors to use as part of their own analysis and due diligence review 231. The additional support documentation and information preferably includes the Issuer's charter and other legal documents, financial audits and opinions, and other disclosures deemed appropriate to substantiate, verify, and/or clarify the information contained in the Offering Memorandum. These materials would be sent electronically and placed in a database by the  
20 Market system server and become available to secured and authenticated review by the Investors 270.

As a condition of the Offering, and incorporated into the terms and conditions of the security documents, there is preferably a provision establishing a secondary market in the shares. An exchange offer, which is an example of a mechanism establishing such a secondary market,  
25 will be described below with reference to Fig. 14.

### **Investor Access to Offerings**

Still referring to Fig. 5, the Offering Process is described with reference to a block diagram depicting an example of an Investor interface portion of a preferred embodiment of the system of the invention. Through a publicly accessible web-site entrance 232, the Investor is  
30 preferably required to log in to the system using the Investor password and identification, to authenticate his or her identity 118. Upon access, the Investor is able to review general information regarding the Market system of the present invention and other information of interest, including a series of Offerings 268 by various Issuers. Additionally, other information such as background on the system of the invention 234, 236, 238, 240, investor relations

assistance 242, 244, 246, 248, Investor account information 250, 252, 254, and a calendar of events 258 will preferably be included and available via the web site 232.

Turning to the block diagram in Fig. 6, the Investor interested in reviewing additional materials regarding a specific Offering found among the current Offerings 268 will be directed to an Issuer's summary page 302, 304, 306, 308, which will briefly describe the Issuer and its Offering in general terms. In a preferred embodiment, the Investor desiring to see further information regarding an Offering will request access to a Deal Page, but prior to seeing the Issuer's actual Deal Page, the Investor will be required to execute an Electronic Non-Disclosure Agreement (NDA) 310. The NDA preferably states that the Investor will be reviewing non-public, confidential information regarding the Issuer and represents that the Investor will not disclose such information, nor use such information in any way other than to evaluate a participation in the Offering. If the Investor agrees to the NDA 312 and electronically executes it, the Investor is permitted to proceed to the Deal Page of the particular Issuer selected. If Investor chooses not to execute the NDA, he or she is returned to the Home Page 314. The Investor with questions relative to the NDA is directed to contact the system's customer service function 316.

Upon executing the NDA, the system of the invention will immediately record this information and electronically send an Investor Profile to the Issuer to inform the Issuer of the identity of the Investor 318. In a preferred embodiment, the Issuer would at this point have the opportunity to either grant or deny the particular Investor access to the Issuer's Deal Page 320. In this way, access to an Issuer's Deal Page would preferably be electronically controlled by the Issuer via the system of the invention. If access is denied by the Issuer, the system will electronically prevent access of the information by the particular Investor 320.

After executing the NDA and assuming the Investor is granted access to the Issuer's Deal Page, the system presents the Investor with the Issuer's Offering. The Deal Page would preferably include various unilateral 324 and bilateral 326 sources of information for an Investor's review. This information found in the Issuer's Deal Page is referred to as the Issuer's Virtual Road Show 322 (VRS). Unilateral 324 and bilateral 326 sources refer to the type of information presented in the VRS 322. A unilateral source is static throughout the Offering process. A bilateral source is dynamic during the Offering process in that it is subject to new input from the Issuer, other Investors, or the system of the invention. The unilateral sources preferably include information from the system's database 270 such as: the Offering Memorandum 330 including the Company Statement 328 and Opinions 332.

Opinions 332 will preferably include various legal, accounting and other related disclaimers regarding the activities and legal liabilities of the system of the invention with respect to the Offering. The bilateral sources largely involve the Investor Community 336, a

hosted newsgroup, where Investors and Issuers may engage in electronic and other discussions regarding the Issuer and the Offering. Such discussions including management interviews would be conducted by email, telephone, and video teleconferencing. Text based discussions would be chronicled and non-text based discussions would be transcribed verbatim and then chronicled.

5 All chronicled information is then preferably stored in the system's database 338 for later, discretionary access by Investors, the system, and other appropriate parties (such as Securities Regulators). To insure limited distribution of materials, only selected information contained within the VRS would be available for printing. In a preferred embodiment, the restriction on printing would be enforced using software that includes a personalized watermark  
10 on all printouts. The watermark would incorporate the specific Investor's name. Thus, any information printed from any of the web pages would contain the personalized watermark of the Investor. In addition, applicable legal and securities non-disclosure and disclaimer language would preferably be included. In an alternate preferred embodiment, document distribution software such as Adobe Acrobat available from Adobe Systems of San Jose, California could be  
15 used to limit which VRS materials are actually printable.

Additionally, while the VRS materials are being made available to Investors (during the Road Show period), an on-site visit 334 to the Issuer's facilities would preferably be arranged and facilitated by the system of the present invention. In a preferred embodiment, communications regarding and during the visit will be audio and/or video recorded, transcribed, chronicled, and  
20 stored in the system's database 338 for later Investor retrieval and review.

### **Auction to Determine Price and Allocate Shares in an Offering**

Turning to Fig. 7, a block diagram depicting an example embodiment of an auction portion of the system of the present invention is explained as it would be used for an offering by an issuer. The Offering Period is the time an Offering is available for bidding by Investors.  
25 During the Offering Period, an Investor may submit a Bid, via the Investor Network 120, indicating the number of shares or the dollar amount the investors wishes to buy and also the maximum price the investor is willing to pay 402. The system of the invention then assigns a unique tracking number to the Bid 404 and stores it in the Bid Database 405. With multiple Bids from multiple Investors, the system conducts an electronic single price call Auction. Such an  
30 Auction accumulates Bids over the Offering Period 414 and closes the bidding at a single price for all shares, balancing the demand and supply of the Bids and the available Offering 412. The use of a call auction mechanism results in a fair allocation of the securities to the bidders in the event that the total volume of bids exceeds the volume of securities in the Offering. Herein, the "volume of bids" denotes the number of shares that inventors would receive at the offering price,  
35 calculating the number of shares in the case of bids stated in dollars as the number of dollars

divided by the price. An important feature of a preferred embodiment of the invention is that the current auction price and volume are continuously displayed during the offering process to the Investor 410.

5 Bids are for a specified number of shares or for a specified dollar investment. An important feature of the preferred embodiment of the invention is the provision for bids specifying the dollar amount of the investment. With this type of bid, the Investor is not required to invest more dollars if the auction price turns out to be high. Instead, the Investor receives proportionally fewer shares.

10 To ensure that bids represent serious intentions to purchase, in a preferred embodiment, bids may not be canceled.

The Offering is described by three quantities. First is the Offering Price, the minimum price acceptable to the Issuer. Second is the minimum number of shares offered. Third is the maximum number of shares offered. The difference between the minimum and the maximum number of shares offered is called the *shoe*.

15 In broad summary, the auction can have three outcomes. First, if the total volume of bids lies between or is equal to the minimum or the maximum number of shares offered, all orders are filled at the offering price. Second, if the total volume of bids exceeds the maximum, the invention finds a market price and an allocation of securities according to the rules described below. Third, if there is inadequate Investor interest and the total volume of bids is less than the  
20 minimum in the Offering, the offer is withdrawn, the auction is canceled, and no bids are filled.

In the first outcome, each investor receives a number shares equal to the number of dollars in the bid divided by the offering price. For example, if an investor specifies a total dollar amount of \$50,000 and the initial offering price is \$5 per share, that investor will receive 10,000 shares. In the second outcome, a successful bidder receives a number of shares equal to the  
25 number of dollars in the bid divided by the auction price. If the dollars bid were \$50,000 and the auction price \$10, the bidder would receive 5,000 shares. We describe the determination of successful bidders below.

It should be noted that, in most cases, the investor does not pay her maximum price but, rather, pays the price determined in the auction (the Auction Price), which is usually lower than  
30 her own maximum price. Thus, for an investor who would want to participate in the offering even if the auction price turns out to be much higher than the initial offering price, the investor should specify a maximum price that is well above the offering price or the current auction price. This high maximum price gives the investor a strong position, as the priority depends first on the maximum price and second on the time when the bid is placed. Of course, there is a possibility  
35 that the auction price will be even above the maximum price specified in the bid, in which case

the investor would be required to later revise her maximum price to a higher level in order to have a chance at participating in the offering.

In the preferred embodiment, the prices bid by Investors are multiples of a unit called the *tick*. For example, if the tick is \$.25, bid prices will be \$.25, \$.50, and so on. Bid prices may not lie between ticks—for example, a bid price of \$.17 would not be allowed with a tick of \$.25. When the Offering Period commences, and bidding begins, the tick will preferably be set to a value of around 3 percent of the price, for example, 10 cents per share in an Auction where the Offering price is expected to be in the range of \$3.00 per share. As the Offering Period nears its end, the tick may be widened in order to encourage bidders to reveal their trading interest early and also to prevent late bidders from gaining priority over earlier bidders for only a small difference in price.

Returning to Fig. 7, If a Bid is not in the acceptable range 422, the Investor may re-bid 424. Indicated auction price and volume are continuously displayed until the auction ends, at which time they become final. The final auction price will be set so that the demand for shares equals the supply of shares. The demand for shares is the number sought by all Investors whose bid prices are at least as high as the auction price. For bids stating a dollar investment, the number sought is the amount of the dollar investment divided by the auction price. The supply of shares is the maximum number of shares offered by the Issuer. Once the final auction price is determined 418, the bidders who have bid prices equal to or greater than the price have their bids accepted, with all successful bidders paying this same price, the Auction Price for the Offering. The invention will issue an electronic confirmation 428 of the accepted bid 422, preparing the Investor for settlement.

In some cases, there will be a higher volume of bids at the Auction Price than the maximum volume for the Offering, but lower volume of bids at any higher price. In such a case, it will be necessary to use an allocation rule to determine which of the Investors who bid the Auction Price (and not higher) will be filled. In the preferred embodiment, these Investors will be filled in the order of the time of their bids. Thus, in the preferred embodiment, bids are ranked first by price priority, and then by time priority among the bids at the market price found in the auction.

Time priority provides an incentive for investors to specify their true maximum price when the bid is first entered, rather than raising it later. However, any other priority system, including *pro-rata* rationing or random choice, may be employed. Note that price has absolute priority—the priority rule is used only for bids specifying maximum prices equal to the auction price. These rules define an auction that encourages participants to bid the values that they place on the securities being traded, and to place their bids early, and thus encourages the maximum

amount of mutually beneficial trade. While the auction provides an incentive to bid early, it allows for late bids as well.

We use the term *allocation* to refer to the determination of which bids are accepted. An accepted bid is said to be *filled*. As noted, all bids that specify maximum prices higher than the  
5 auction price are filled and are in the allocation. Bids specifying exactly the auction price are filled in order of priority. As the auction progresses, the allocation changes as new bids are entered. Bids are actually filled after the conclusion, based on the allocation at the time of the conclusion.

As an example, suppose an Investor comes home from vacation to find an auction only  
10 one day from close for a particular Issuer, which she believes is going to be a big success. She sees a price of \$11.00 per share for the entire deal, and is willing to pay more than this amount. The tick is \$1.00. The Investor bids \$12.00 and bumps some bidders with whose Bids in the Bid Database 405 specify prices of \$11.00. We use the term bump to refer to the displacement of one or more bids from the allocation by a new bid as it enters the allocation. This outcome is fair  
15 because the new Investor values the stock more highly than others do. And the new Investor pays a penalty for bidding late, because had she bid earlier, she could have placed a bid of \$11.00 and had a good chance of her bid being filled at the lower price instead of having to bid \$12.00.

An investor may update her bid during the auction by raising her maximum price. This is a desirable step if she decides that she places a higher value on the shares than the maximum  
20 price specified in her previous bid.

Fig. 8 summarizes a method for determining the price of an Offering's shares via an Auction according to a preferred embodiment of the present invention. In Step S17, the Tick is set to a small percentage of the offering price. In Step S18, Investors submit binding bids via the Investor Network. Each bid includes a specification by the investor submitting the bid of the total  
25 dollar amount she desires to invest in the offering or the number of shares. In one embodiment, the investor must specify a dollar amount that is at least \$25,000. In the preferred embodiment, at the time of the bid, the investor specifies a maximum price that the investor is willing to pay per share. Later, the investor is given the opportunity to raise the maximum price, if the allocation reaches the point that the bid will not be filled. In Step S19, the Bids are assigned identification  
30 numbers and are time/date stamped. At this point, Step S20, the system of the present invention determines whether the maximum price of each of the Bids is at or above the current price. If not, it is rejected and the Investor is given an opportunity to bid again in Step S21.

If the Bid is accepted, it is recorded in the Bid Database in Step S22. The Investor receives an acknowledgement that the Bid was accepted. In Step S23, as the Offering Period  
35 runs, the Tick increment can be increased. In Step S24, the current auction price is calculated as described in detail below. As more Investors make competing bids, the price, which is

continuously displayed, may be driven upwards. In Step S25, as the price increases, Investors whose Bids have been surpassed by the price, are notified that their bids have been bumped. The bumped bids have dropped out of the allocation according to the rules of price and time priority. Investors with bumped Bids are given a chance to re-bid via Steps S21 and S18. The system  
5 continues to loop through Steps S18, S19, S20, S22, S23, S24, S25, and S27 until the Offering period ends in Step S27.

Once the Offering Period ends after Step S27, the Final auction Price has been established in the last execution of Step S24. The accepted bids are filled in Step S29. All bids specifying maximum prices above the Final Price are filled. Bids specifying maximum prices  
10 equal to the Auction price are filled in order of age, oldest first. Age is determined by the time when the maximum price was last increased, if the Investor has re-bid.

In Step S31, the system of the present invention provides the Investors with successful Bids confirmation that their Bids will be filled. Finally, in Step S32, the system facilitates the actual closing transaction as described below.

Turning to Fig. 9, a block diagram depicting an example embodiment of four phases of an auction portion of the present invention is explained. In the preferred embodiment, in the first phase, in Step S40, the system accepts bids without reporting the volume of the bids. This phase, called *pre-ordering*, lasts for a predetermined time, such as a week (Step S41). In the second phase, called the *ordering period*, starting at Step S42, all of the steps shown in Figure 8 occur,  
20 including the reporting of the current auction price and volume. The second phase ends after a predetermined amount of time such as 4 weeks (Step S43) if volume does not reach the minimum, and the offering is withdrawn (Step S44). If, after the predetermined time (e.g., 4 weeks), volume is between the minimum and the maximum (Step S45), the offering is concluded and all bidders are filled at the offering price (Step S46). During the ordering period, if volume  
25 reaches the minimum and a predetermined amount of time (such as five days) has elapsed (Step S47), the third phase, the auction extension, begins (Step S48). During the Auction Extension, all of the steps shown in Fig. 8 occur, except that Investors may not enter new bids. In one embodiment, no investor can bid for a larger dollar amount than she bid for during the open ordering period. In an alternative embodiment, no investor can bid for a larger number of shares  
30 than she bid for during the open ordering period. In either embodiment, investors can only revise their bids by raising price. Investors whose bids are bumped at Step S25 of Fig. 8 may choose to re-bid at Step S21 of Fig. 8. When they re-bid, they may bump other bids. The Auction Extension phase ends when a specified period such as 12 hours has elapsed without any bid being bumped (Step S49) or if the Extension has lasted more than a specified number of business days (Step  
35 S51). In the latter case, the process enters the Extension Speedup phase, Step S52, which is the same as the Extension phase, except that the quiet period without any bumps needs to be only a

shorter period, such as 4 hours, to conclude the auction. The hours referred to here are preferably between 9 am to 9 p.m. In one embodiment, bidders who are bumped have specified periods in which to re-bid, such as 12 hours during the extension period and 4 hours during the speedup period.

5           At the beginning of the extension period, at Step S48 in Fig. 9, all bidders whose bids were previously bumped are notified that they need to re-bid before the end of the extension period in order to remain in the auction. The extension period could end in the time specified at Step S49. In particular, the bidders so notified are all bidders who have bid prices lower than the auction price going into the extension period, plus bumped bidders whose maximum prices are  
10           equal to the auction price but have inadequate time priority to be filled, plus perhaps one bid that is partially bumped

          In an alternative embodiment, the tick or bid increment may be fattened (made larger) during the extension phase or the speedup phase. A fatter tick implies it takes fewer price increases to reach the final price.

15           In the preferred embodiment, all bidders can raise their maximum prices at any time during the extension period or the speedup period. In an alternative embodiment, only investors whose bids have been bumped can adjust their maximum prices during those periods.

### **Auction with Sales Bids**

          When the auction is used to support a secondary market, participants can enter sales bids  
20           as well as purchase bids. Sellers can place bids to sell specified numbers of shares at a price at least as high as a minimum specified in the bid. When the auction is used to place an initial offering, as in our earlier discussion, there is, in effect, a single bid to sell, in which the minimum price is the offering price and the number of shares is the maximum size of the offering.

          The auction system described above will function with sales bids as well as purchase  
25           bids. The only additional aspects of the system with sales bids are to specify the rules for entering and altering bids during the various phases of the process. In one embodiment, during the first two phases, sale bids can be entered in the system freely. Sale bids can be changed during the extension periods by lowering their minimum prices. The auction ends during the extension phases when the specified period, such as 12 hours, has elapsed without any change in  
30           the auction allocation—that is, no buyer and no seller has been allocated either greater or fewer shares.

### **Calculating the Auction Price and Allocation**

          Here we provide further details about the determination of the auction price. In this description, we consider both purchase and sale bids.



In the preferred embodiment, the auction price is calculated to the penny rather than being rounded to the nearest tick. In one alternative embodiment, the price is rounded up to the nearest higher tick. In this case, the auction may result in some unallocated shares. In a second alternative embodiment, the price is rounded down to the nearest lower tick. In this case, the auction may result in an allocation of more shares to purchasers than are available. In both alternative cases, the mop-up process to be described later may be able to deal with the gap between allocated and available shares.

The auction price satisfies the following conditions, which make precise the concept of demand being equal to supply:

- 10        1. The number of shares desired by investors equals the number of shares offered. (The number of shares desired by purchasers is the total dollars bid by all purchasers placing dollar bids whose maximum prices are at least as high as the auction price divided by the auction price, plus the number of shares bid by purchasers placing bids with specified numbers of shares whose maximum prices are at least as high as the auction price),
- 15        OR
2. The number of shares desired by purchasers exceeds the number offered by sellers, but the number of shares desired by purchasers would fall short of the number offered by sellers at any higher price,
- OR
- 20       3. The number of shares desired by purchasers falls short of the number offered by sellers, but the number of shares desired by purchasers would exceed the number offered by purchasers at any lower price.

We call these allocations of Types 1, 2, and 3. In general, the Auction Price is determined by calculating the price that satisfies one of these mutually exclusive conditions. A specific method for finding the auction price in accordance with one embodiment is shown in Fig. 10. The auction price is determined as follows:

Let  $i$  range over all bids of all kinds,  $i=1, \dots, N$ , sorted in increasing order of price (852). Let  $p_0$  be a price lower than the price specified in any bid and let  $p_N$  be a price higher than the price specified in any bid. Let  $V_i$  be the dollar amount, in the case of a dollar purchase bid, or zero otherwise,  $D_i$  be the number of shares sought by a buyer, in the case of a purchase bid specifying a number of shares, or zero otherwise, and let  $S_i$  be the number of shares offered by a

seller, in the case of a sale bid, or zero otherwise. Further, let  $p_i$  be the maximum price willing to be paid by a buyer or the minimum price acceptable to a seller, per share. Define

$$D(p) = \sum_{p_i \geq p} \frac{V_i}{p} + \sum_{p_i \geq p} D_i$$

$$S(p) = \sum_{p_i \leq p} S_i$$

5 and

$$X(p) = D(p) - S(p)$$

These are the demand function, the supply function, and the excess demand function (854), respectively.

Step 1 (852): Sort the bids by price from lower to higher and compute excess demand at  
10 each price (854). At step 856, find the highest bid price,  $p_i$ , where excess demand is not negative:  $X(p_i) \geq 0$ . Let  $\underline{i}$  be the bid number and let  $\underline{p} = p_{\underline{i}}$  be the price. If

$$X(p_{N-1}) = X(p_N) = 0, \quad \underline{p} = p_{N-1}.$$

Step 2: Set  $\bar{p} = p_{\underline{i}+1}$ . Note that  $X(\bar{p}) < 0$  except in the case  $X(p_N) = 0$ .

Step 3 (858): If  $X(\underline{p}) = 0$ , terminate with the auction price  $p^* = \underline{p}$ .

15 Step 4 (860): If  $X(\bar{p}) = 0$ , terminate with the auction price  $p^* = \bar{p}$ .

Step 5 (862): If  $X(\underline{p}) \leq \frac{V_{\underline{i}}}{\underline{p}} + D_{\underline{i}}$ , terminate with the auction price  $p^* = \underline{p}$ .

Step 6 (864): If  $X(\bar{p}) \geq -S_{\underline{i}+1}$ , terminate with the auction price  $p^* = \bar{p}$ .

Step 7 (866): Calculate  $V = \sum_{p_i \geq \bar{p}} V_i$  and  $N = \sum_{p_i \leq \underline{p}} S_i - \sum_{p_i \geq \bar{p}} D_i$ , and terminate with

the auction price  $p^* = \frac{V}{N}$ .

## 20 **Filling Bids**

All purchase bids with maximum prices in excess of the auction price are filled completely. Those specifying a dollar amount are filled with a number of shares equal to the dollar amount divided by the auction price. Those specifying a number of shares are filled with that number. All sale bids with minimum prices below the auction price are filled completely as  
25 well.

Turning to Fig. 11, the rules for filling bids are depicted, for bids that specify maximum or minimum prices equal to the auction price. In a Type 1 allocation, as defined above, all bids with prices equal to the auction price are filled completely as well.

In a Type 2 allocation, all sale bids with minimum price equal to the auction price are filled. Purchase bids with maximum price equal to the auction price are filled in priority order. One purchase bid in a Type 2 allocation may be filled partially.

In a Type 3 allocation, all purchase bids with maximum prices equal to the auction price are filled. Sale bids are filled in priority order. One sale bid maybe filled partially.

### ***Mop-up***

In some embodiments, after the conclusion of the offering, a mop-up is conducted. In particular, if an investor has received a partial fill and would rather have no shares, an attempt is made to find another investor willing to take those shares at the auction price paid by all investors. If there are additional shares available but not sold during the offering, then these shares are offered to all investors at the auction price.

### ***Disclosure during the auction***

In what is called a closed-book auction, bids are collected during a specified period without disclosing any information to any bidder about the bids submitted by other bidders. In a full open-book auction, bidders can see information about the individual bids made by others. Auctions may disclose limited information and thus fall between the closed and fully open versions. An advantage of a closed book is that bidders have no opportunity to behave strategically. In particular, a bidder has no incentive to hang back, either by bidding late or by bidding an amount less than his or her true maximum. Actual experience with computer-based auctions at eBay.com suggests that this type of behavior is common when the book is open. On the other hand, a disadvantage of a closed book is that bidders cannot learn from the bids of others, and also no one can learn that a deal is poised to be sold for a low price and thus attract new bidders to the auction. In securities markets and many other markets, bidders appear to gain substantial information from the participation of other investors.

In the preferred embodiment, the information disclosed is (1) the fraction of the offering that is sold and (2) the price at which the offering will sell if no additional bids are entered. This information is updated continuously during the period when bids are collected, as follows: In response to an inquiry, show the auction price that would result if the auction were closed on the basis of the bids submitted thus far. After each bid, the auction price and allocation are determined (Figure 10) and it is disclosed to the bidder whether her bids would be filled, fully or partially, based on the current bids (but this or any other information about individual bids to

others is not revealed to others). Finally, the bidder is shown the price that the bidder would need to bid in order to ensure participation in the auction, on the basis of current bids. If bidders are bumped out of the auction as new bids come in, these bumped bidders are notified.

In one embodiment, during the initial offer period, all subscribers to the capital market system (and not just those who signed an NDA for the particular issue) are provided access to current price information. The goal of the open auction is to allow price and the trading interest of others to attract more interest to the auction. Given this goal, it is useful to give potential investors access to a brief description of the issuing company and information about price and the level of interest.

In some embodiments, the demand curve is computed and displayed to system managers, though this information is generally not revealed to investors or to the sales force. The demand curve has price on the vertical axis and number of shares on the horizontal axis. Let  $D(p)$  be the total dollars bid by investors whose maximum prices are  $p$  or higher. The graph is started at the point  $(0, p)$  for the highest maximum price among all purchasers. Then a horizontal line is drawn to the point  $(D(p)/p, p)$ . Then, a curve  $(D(p)/q, q)$  for  $p^* \leq q \leq p$ , is drawn, where  $p^*$  is the next lowest price. Then, a horizontal line is drawn to the point  $(D(p^*)/p^*, p^*)$ , and so on.

Also, the supply curve is drawn. In the case of an initial offering, the supply curve has a horizontal line at the offering price from the minimum to the maximum number of shares offered, and then a vertical line up to the highest relevant price.

The theory behind our auction is described in Application No. 60/159,621, filed October 14, 1999, and entitled "Computerized Single-Price Multiple Unit Auction With Expenditure Bids," the disclosure of which is hereby incorporated herein by reference.

### Auction Glossary

Because of the necessary complexity of our description of the auction, we provide here a glossary of the special terms we use in the description and in our later claims.

<i>Term</i>	<i>Meaning</i>
Allocation	A determination of the number of shares to be provided to purchase bidders and to be accepted from sale bidders, according to the method of Fig. 11
Auction extension	Period when no new bids are accepted in the auction, but earlier bidders can alter their bids in order to remain in the allocation
Auction price	Price that results from applying the method of Fig. 10 to a set of purchase and sale bids

Bump	Departure of a bid from the allocation because another more favorable bid entered the allocation
Demand curve	A two-dimensional graph, with number of shares on the horizontal axis and price on the vertical axis, depicting the number of shares sought by bidders at each price
Equal buying and selling interest	The result of finding the auction price and the corresponding allocation; the point where the demand curve crosses the supply curve
Excess demand	The excess of the number of shares desired to be purchased at a given price over the number of shares desired to be sold at that price
Extension period	Period when no new bids are accepted in the auction, but earlier bidders can alter their bids in order to remain in the allocation
Fill a bid	Allocate shares to a purchase bidder or from a sale bidder; in the case of a purchase bid stated in dollar terms, the fill involves a number of shares equal to the dollars specified in the bid divided by the auction price
Initial offering	An auction where an issuer is the only sale bidder
Maximum price	A purchase bidder's designation of the maximum price that the bidder will pay
Minimum price	A sale bidder's designation of the minimum price that the bidder will accept
Mop up	Exchanges of shares after the auction at the auction price
Offering price	A price set by an issuer in an initial offering, representing the minimum price at which shares will be sold
Priority rule	Rule for determining which bids are filled among those that specify maximum purchase prices or minimum sale prices equal to the auction price
Quiet period	Period of predetermined length, such as 12 hours, during which the auction allocation does not change
Re-bid	Increase in the maximum price of a purchase bid or decrease in the minimum price of a sale bid
Secondary auction	An auction where any number (limited to the amount of stock outstanding) of sale bids can be made
Speedup	Auction extension in which the quiet period is shorter—such as 4 hours instead of 12 hours
Supply curve	A two-dimensional graph, with number of shares on the horizontal axis and price on the vertical axis, depicting the number of shares offered by sale bidders at each price
Tick	A quantity, such as \$.25, such that bid prices are stated as a multiple of the tick, such as \$3.00, \$3.25, and so on
Volume	In an initial offering, the total number of shares sought by purchasers, counting bids stated in dollar terms as seeking a number of shares equal to the dollars specified divided by the offering price

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## Closing Transactions

Turning to the block diagram in Fig. 12, once the price is set, the system of the invention facilitates the transaction, with appropriate legal counsel, by creating a record of the auction allocation (including the identity of each successful participant in the auction and the price of each allocated security), issuing the Issuer's securities, and handling the receipt and disposition of Investor purchase consideration 504. In a preferred embodiment, the transaction is documented via a Securities Purchase Agreement (hereinafter "SPA") 502, which has been standardized, and generally allows for only financial terms to be altered or amended. Such SPAs are accessible in generic form to the Investor Network for review via the system's Web-site 270. When applied to a specific Offering, the SPA is completed by appropriate legal counsel, and disseminated online to the Investors participating in the purchase of the Offering. Available to the Investor through the Deal Page is an annotated version of the SPA, reflecting the differences between the generic form and Offering specific form. Throughout this process, the authenticity procedures insure that only the participating Investors receive and execute the SPA.

## Reporting after an Offering

Turning now to Fig. 13, a block diagram depicting an example of a preferred embodiment of a Reporting portion of the system of the present invention is described. Upon the closing of the transaction, and mandated through the life of the investment, each new Issuer 602 is preferably required to provide detailed financial and managerial reports to each Investor that purchased a portion of the Offering of the Issuer. The nature and depth of this reporting is atypical for private (unregistered) securities, but an important element of the present invention.

Our invention adapts processes for reporting to shareholders that apply currently to public equity. Every company that has registered securities is required to file certain periodic reports with the SEC. Generally these reporting requirements apply to a company so long as its securities remain registered under the Securities Exchange Act of 1934. These SEC mandated reports include Annual Reports on Form 10-K, Quarterly Reports on Form-10Q, and Current Reports on Form 8-K. Public companies generally must also comply with the proxy regulations when soliciting a vote or consent of stockholders. Forms 10-K and 10-Q include descriptions of the company's business for the preceding period, including financial statements, and Management Discussion and Analysis (hereinafter "MD&A") relating to the periods covered by the financial statements. Form 8-K is intended to supplement the other Forms, when material events occur that should be brought to the immediate attention of the investing public, such as a merger, sales of significant assets, bankruptcy or change of accountants. The rules specify certain events that must be disclosed, and also permit its voluntary use for other events at the option of the company.

In addition, companies that are traded on the NASDAQ Stock Market of the National Association of Securities Dealers, Inc., must file with NASDAQ copies of documents filed with the SEC and exchange-traded companies must file copies with the applicable exchange. The purpose of this reporting is to keep the securities markets and its stockholders informed as to material developments, both favorable and unfavorable, to enable informed investor activity.

The present invention achieves the same Reporting purpose in private securities as mandated by the SEC for publicly traded securities, *i.e.*, the continued dissemination of information regarding performance and developments in order to keep the Investor informed as to the most recent status of the Issuer. Because the Offerings traded within the system of the present invention are not publicly traded, the information requirements are directed solely to the Investors who purchased portions of the Issuer's Offering, and to investors who wish to participate in the secondary market, after they sign an NDA. It is a feature of the present invention to require participating Issuer's to comply with certain predefined and contractually agreed to Reporting requirements and verification protocols. Further, the system of the present invention facilitates the dissemination of information in a timely and cost efficient manner, utilizing the system's Investor network.

Reporting requirements establish accountability on the Issuer, its management and its board, while the Investors obtain a valuable portfolio management tool, enabling the Investor to track the performance of the Issuer, a major shortcoming of prior art methods of investing in unregistered securities. The meeting the requirements is preferably facilitated by the use of various electronic templates (Templates A, B, and C) 604.

In a preferred embodiment, Template A is a spreadsheet table, partially tailored to the Issuer's line of business, which is preferably completed by the Issuer on a quarterly basis, approximately 30 days after the end of the fiscal quarter. The Issuer would receive this template via its web site and would insert key financial data, such as sales, gross profit, operating income, and certain balance sheet items. This spreadsheet, when completed, is electronically sent to the system of the invention for review 606. Concurrently, the Issuer is required to complete Template B, which consists of a MD&A of the most recent fiscal period, but unlike its reporting public counterparts, such discussion would include a discussion and analysis of the Issuer's operating performance vis-a-vis its previous period and its budgeted or forecasted numbers. This would allow the system and Investors to ascertain how the Issuer performed relative to what it had told its Investors, through its Offering Period and subsequent projections. Additionally, supplemental information of a non-financial nature is preferably provided, which may include key hires, new customers, or litigation, or any other material developments during the period 609. This collective information is similarly conveyed electronically to the system for review. The aggregated information is then edited, only for presentation purposes, by the system and

packaged into the Report 612, which is disseminated to each Investor's web site 614. Among other things, information from Template A is directed into the system's valuation model of the Issuer, which will provide a current valuation study on the Offering, utilizing a series of valuation methodologies 608, 610. The valuation assumes a minority interest and is based on the Issuer's current performance and current market conditions, including applying market multiples.

Additionally, Template C is similarly prepared by the Issuer on a periodic basis, but only when some material development occurs out of normal Report sequence and in which the Issuer's management and its board of directors feel a fiduciary obligation to inform the Investors 604. This is similar to a public 8-K SEC form. Again, Template C is sent electronically to the system, which in turn, performs some production editing, without changing content. In a preferred embodiment, a periodic Journal is produced and disseminated to the Investors' Web sites.

Approximately two weeks after the dissemination of the Report, the system of the invention hosts a Discussion Group 616, wherein the Issuer and Investors will engage in a real-time newsgroup, discussing in bilateral fashion, the contents of the Report and other matters of substance regarding the Issuer. This Discussion Group would preferably be electronically hosted with transmission via the Internet, and would make use of text, audio, and video modalities. Further, important to the invention, all comments are transcribed and stored in the database for time delayed retrieval, for those Investors not available to participate in real time 618.

Reports and Journals are preferably disseminated only to Investors in the Issuer's Offerings. However, the information contained therein would also be utilized in the Exchange Offering, described below.

### **Secondary Market**

An important feature of the invention provides a method to allow purchasers of minority positions in unregistered securities to liquidate their investments at fair market value and on a regularly scheduled, periodic basis, without having to wait until a registration statement is filed or the particular issuing company is sold.

In the preferred embodiment, investors are able to liquidate their holdings through periodic secondary market auctions (such as Exchange Offerings). Prospective sellers place sale bids in the auction, hoping to sell to existing shareholders who wish to enlarge their holdings, and to new shareholders. The auction process finds a price that balances selling and buying interest.

With reference to Fig. 14, an example of an Exchange Offering implemented in accordance with the present invention will next be described. An important feature of the invention provides a method to allow purchasers of minority positions in unregistered securities



to liquidate their investments at fair market value and on a regular basis, without having to wait until a registration statement is filed or the particular issuing company is sold.

At a predetermined date from the Offering, and subject to Investor Approval, the securities sold as part of the Offering are repurchased or redeemed by the Issuer, with the funding  
5 to do so being generated from a new Offering by the Issuer, with the exact same terms and conditions, except for price. This new re-offering is referred to as an Exchange Offering 702.

Investor Approval 704 is solicited electronically, with no more than a certain predefined percentage approval needed to obligate the Issuer to engage in the Exchange Offering 702. In a preferred embodiment, the predefined percentage would be 20% or less. If approval is not  
10 achieved, no exchange will take place 708. In a preferred embodiment, the Issuer is subject to certain penalties for not complying with the Investor mandated Exchange Offering 702.

By issuing a similar security, particularly in terms of equity participation, for example 10% of the Issuer's fully-dilute common stock, the price a purchaser is willing to pay will be based on current status and performance of the Issuer as well as market conditions. For example,  
15 consider the situation if, at the time of the Offering, the Issuer sold a Convertible Preferred Stock Series A (hereinafter "Series A"), raising \$2 million, with Series A being convertible into 10% of the common stock. One year hence, based on the performance, investor interest, and market conditions, that 10% common stock equivalent is valued at \$3 million. The Issuer, by simultaneously issuing and retiring the same security, allows the holder of the original Offering,  
20 i.e. the Series A the opportunity of liquidating his holdings through this process, if he so chooses. If he elects to maintain his investment, the Investor will exchange his original security (Offering) for the new security (Exchange Offering), which is treated as a tax-free exchange under the Internal Revenue Service Code. The system of the invention, through its VRS process and ability to disseminate its databased information regarding the Issuer, will facilitate the sale of the  
25 Exchange Offer, in the same manner as the original Offering.

In a preferred embodiment of the invention, the Exchange Offer process is identical to the Offering process, in terms of analyzing and valuing the current security 705 and availing the opportunity to the entire Investor Network (to create broad based demand) via a Deal Site 710, NDAs 310, secured access, VRS 322 dynamics and Auction mechanics 410.

30

#### General Remarks

While the method and apparatus of the present invention has been described in terms of its presently preferred and alternate embodiments, those skilled in the art will recognize that the present invention may be practiced with modification and alteration within the spirit and scope of

the appended claims. The specifications and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense.

Further, even though only certain embodiments have been described in detail, those having ordinary skill in the art will certainly understand that many modifications are possible  
5 without departing from the teachings thereof. All such modifications are intended to be encompassed within the following claims.

**What is claimed is:**

1. A method of facilitating capital formation comprising the steps of:  
subscribing a set of accredited investors;  
selecting one or more issuers offering unregistered securities;  
5       executing an online auction to enable the accredited investors to bid for shares of the  
          issuers' unregistered securities; and  
          allocating the shares among the accredited investors.
2. The method of claim 1 further comprising the step of:  
electronically distributing information useful to accredited investors to decide whether to  
10       invest in the issuers' unregistered securities.
3. The method of claim 1 further comprising the step of:  
providing a secure communication network operable to allow accredited investors to  
communicate with each other and the issuers in confidence.
4. The method of claim 1 further comprising the step of:  
15       providing a secure communication network operable to allow issuers to provide  
          controlled access to accredited investors of confidential information about their  
          unregistered securities.
5. The method of claim 4 wherein the step of providing a secure communication network  
includes requiring the accredited investors to execute a legally binding non-disclosure agreement  
20       electronically before controlled access to confidential information about the issuers' unregistered  
          securities is provided.
6. The method of claim 1 wherein the step of executing an online auction includes executing a  
single-price call auction.
7. The method of claim 1 wherein the step of executing an online auction includes a step of  
25       accepting a bid stating the number of dollars desired to be invested.

8. The method of claim 1, wherein the step of executing an online auction includes a preliminary operation in which bids are accumulated without disclosing information about aggregate bids.
9. The method of claim 1, wherein the step of executing an online auction includes a step of reporting the current price and volume to potential investors.
- 5 10. The method of claim 1, wherein the step of executing an online auction includes a step of limiting bids to multiples of a tick.
11. The method of claim 10, wherein the step of limiting bids to multiples of a tick includes a step of increasing the size of the tick as the auction progresses.
12. The method of claim 1, wherein the step of executing an online auction includes a step of  
10 allocating shares to bidders whose bid prices are equal to the auction price, according to a priority rule.
13. The method of claim 12, wherein the priority rule is by time.
14. The method of claim 13, wherein the priority rule assigns priority based on the time when the bidder entered the bidder's final maximum or minimum price.
- 15 15. The method of claim 1, wherein the step of executing an online auction includes a step of informing a bidder in real time that, as a result of other more recent bids, a bid will not be filled.
16. The method of claim 1, wherein the step of executing an online auction includes a step of the bidder to raise the bidder's maximum price in order to re-enter the auction.
17. The method of claim 1, wherein the step of executing an online auction includes a step of  
20 finding a price to the nearest penny, that equates buying interest to selling interest.
18. The method of claim 1, wherein the step of executing an online auction includes a step of allocating shares that fills all the bids of purchasers bidding maximum prices above the auction price, fills purchase bids with maximum prices equal to the auction price in order of priority, and does not fill purchase bids with maximum prices below the auction price.

19. The method of claim 1, wherein the step of executing an online auction includes a post-auction mop-up step, wherein additional transactions may occur at the auction price.
20. The method of claim 1, wherein the step of executing an online auction includes a step of conducting an extension period during which new bids are not accepted.
- 5 21. The method of claim 20, wherein the auction ends after a quiet period of predetermined length has elapsed, during which no change in the auction allocation has occurred.
22. The method of claim 21, wherein the length of the quiet period is shortened to a second predetermined length, after a predetermined period has elapsed.
23. The method of claim 1, wherein the step of executing an online auction includes a step of  
10 displaying the demand and supply curves.
24. The method of claim 1 wherein the step of selecting one or more issuers offering unregistered securities includes the steps of:
- conducting a multi-stage review of issuers offering primary securities;  
developing standardized documentation describing the issuers and their primary  
15 securities; and  
selecting one or more of the issuers based upon an analysis of the standardized documentation relative to pre-defined criteria.
25. The method of claim 24 further including the steps of:
- storing the standardized documentation in the form of an offering memorandum on a  
20 networked server; and  
providing a secure network to allow the plurality of accredited investors controlled access to the standardized documentation.
26. A market system for buying and selling unregistered securities comprising:
- a plurality of computers interconnected by a network and operable to communicate via a  
25 secure and private protocol;  
a first software module running on one or more of the computers for accessing a database of objects defining selected unregistered securities of issuers;  
a second software module running on one or more of the computers for accessing a database of objects containing decision making support information for

- accredited investors to determine whether to invest in one or more of the selected unregistered securities;
- a third software module running on one or more of the computers for executing an auction to determine a price for the unregistered securities;
- 5 a fourth software module running on one or more of the computers for executing the sale of the unregistered securities to the accredited investors at the price determined in the auction.
27. The system of claim 26, further including:
- 10 a network of accredited investors operable to execute the first through fourth software modules.
28. Database software for operating a market system for selling unregistered securities of issuers to accredited investors, the database software comprising:
- 15 a plurality of objects representative of accredited investors;
- a plurality of objects representative of unregistered securities of issuers;
- 15 a plurality of objects representative of bids from the accredited investor objects for the purchase of the unregistered securities objects; and
- an auction module for processing the bid objects to determine a final price for selling the unregistered securities.
29. A network system of one or more programmed computers implementing a market system for
- 20 accredited investors to invest in companies through the purchase of unregistered securities of the companies, the network of programmed computers comprising:
- a plurality of computers interconnected by a network and operable to communicate via a secure and private protocol;
- 25 a first software module running on one or more of the computers for identifying particular unregistered securities of companies as qualified investment opportunities;
- a second software module running on one or more of the computers for providing decision making support to accredited investors for selecting unregistered securities identified as qualified investment opportunities within which to invest;
- 30 a third software module running on one or more of the computers for pricing the qualified unregistered securities;
- a fourth software module running on one or more of the computers for offering the qualified unregistered securities for sale to the accredited investors; and

a fifth software module running on one or more of the computers for executing transactions wherein the selected qualified unregistered securities are purchased by the accredited investors.

30. The system of claim 29, wherein the second software module includes:

- 5 a sixth software module running on one or more of the computers for assessing the level of risk involved in investing in a particular unregistered security;
- a seventh software module running on one or more of the computers for generating and distributing financial and managerial reports about the companies on-line to the accredited investors; and
- 10 an eighth software module running on one or more of the computers for generating standardized analysis's of the companies.

31. The system of claim 29, wherein the third software module includes:

- a software module for executing a single price call auction for setting the price of the unregistered securities and for recording purchase commitments for the
- 15 unregistered securities.

32. An on-line market system for accredited investors to invest in companies through the purchase of unregistered securities of the companies, the system comprising:

- means for identifying companies as qualified investment opportunities;
- means for providing decision making support to the accredited investors;
- 20 means for setting a price for the unregistered securities;
- means for committing the unregistered securities to be sold to the accredited investors at the set price; and
- means for executing transactions wherein the unregistered securities are purchased by the accredited investors at the set price.

25 33. The system of claim 32, wherein the means for providing decision making support includes:

- means to determine the level of risk involved in investing in a particular unregistered security;
- means for generating and distributing financial and managerial reports about the companies on-line to the accredited investors; and
- 30 means for generating standardized analyses of the companies.

34. The market system of claim 32, wherein the program includes the steps of:

assessing the level of risk involved in investing in a particular unregistered security;  
generating and distributing financial and managerial reports about the companies on-line  
to the accredited investors; and  
generating standardized analyses of the companies.

- 5 35. A network system of one or more programmed computers implementing a market system for  
accredited investors to invest in companies through the purchase of unregistered securities of the  
companies, the network of programmed computers running a program comprising the steps of:  
identifying particular unregistered securities of companies as qualified investment  
opportunities;  
10 providing decision making support to accredited investors for selecting qualified  
unregistered securities identified as qualified investment opportunities within  
which to invest;  
pricing the qualified unregistered securities;  
offering the qualified unregistered securities for sale to the accredited investors; and  
15 executing transactions wherein the selected qualified unregistered securities are  
purchased by the accredited investors.
36. A capital market system comprising:  
a secure communications network;  
means for providing support during capitalization via the communications network to  
20 selected issuers offering unregistered securities; and  
means for providing support to accredited investors in the selected issuers' unregistered  
securities,  
wherein the support to both the selected issuers and the accredited investors includes  
providing verified information on demand to a controlled subset of the  
25 accredited investors regarding the issuers and their unregistered securities via the  
communications network.
37. The system of claim 36 wherein the support to the selected issuers and the accredited  
investors further includes:  
means for providing an initial review, analysis and structuring of transactions on behalf  
30 of the selected issuers including means for aggregating and assembling  
information in order to facilitate review and analysis.



38. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

means for disseminating applicable information to a qualified network of the accredited investors to facilitate appropriate intercourse between the accredited investors and the selected issuers on a timely basis.

39. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

means for managing a pricing process to establish a final price for the unregistered securities.

40. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

means for allocating shares of the unregistered securities to the accredited investors.

41. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

means for establishing standards of required post-transaction information.

42. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

means for disseminating standards of required post-transaction information from the selected issuers to the accredited investors who invest in the selected issuers.

43. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

means for facilitating the sale, on a regularly scheduled basis, of the unregistered securities held by accredited investors who have invested in the selected issuers securities.

44. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

means for facilitating review, assessment, participation in dialogue, and communication of a binding purchase bid, all by the accredited investors, to purchase primary securities offered by the selected issuers

45. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

5 a database including salient and reliable information regarding at least one of the issuer, the securities offering, the management of the issuer, historical managerial performance, historical financial performance, projected managerial performance, and projected financial performance.

46. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

10 a venue that maximizes the number of accredited investors assessing the selected issuers' unregistered securities to improve price setting and consumption of the unregistered securities.

47. The system of claim 36 wherein the support to the selected issuers and the accredited investors further includes:

15 means for increasing the number of accredited investors and the number of selected issuers by marketing methods including at least one of direct marketing, brand building, and indirect marketing.

48. A method of operating a capital market system comprising:

20 providing a secure communications network;  
supporting selected issuers in offering unregistered securities during capitalization via the communications network; and  
supporting accredited investors in investing in the selected issuers' unregistered securities,  
wherein the steps of supporting the selected issuers and the accredited investors includes  
25 providing verified information on demand to a controlled subset of the accredited investors regarding the issuers and their unregistered securities via the communications network.

49. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:

30 providing an initial review, analysis and structuring of transactions on behalf of the selected issuers including aggregating and assembling information in order to facilitate review and analysis.

50. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:
- disseminating applicable information to a qualified network of the accredited investors to facilitate appropriate intercourse between the accredited investors and the selected issuers on a timely basis.
51. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:
- managing a pricing process to establish a final price for the unregistered securities.
52. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:
- allocating shares of the unregistered securities to the accredited investors.
53. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:
- establishing standards of required post-transaction information disclosure.
54. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:
- disseminating and enforcing standards of required post-transaction information disclosure from the selected issuers to the accredited investors who invest in the selected issuers.
55. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:
- facilitating the sale, on a regularly scheduled basis, of the unregistered securities held by accredited investors who have invested in the selected issuers securities.
56. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:
- facilitating review, assessment, participation in dialogue, and communication of a binding purchase bid, all by the accredited investors, to purchase primary securities offered by the selected issuers

57. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:

5       providing salient and reliable information regarding the following: the securities offering, the management of the issuer, historical managerial performance, historical financial performance, projected managerial performance, and projected financial performance.

58. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:

10       providing a venue that accommodates a large number of accredited investors assessing the selected issuers' unregistered securities to improve price setting and placement of the unregistered securities.

59. The method of claim 48 wherein the steps of supporting the selected issuers and the accredited investors further includes the step of:

15       raising the number of accredited investors and the number of selected issuers by marketing methods including at least one of direct marketing, brand building, and indirect marketing.

60. A computer readable medium for use in a capital market system, the computer readable medium storing a computer program defining the processing steps of:

20       identifying a plurality of accredited investors;  
selecting one or more issuers offering unregistered securities;  
executing an online auction to enable the accredited investors to bid for shares of the issuers' unregistered securities; and  
distributing the shares of the issuers' unregistered securities to winning bidders for a price determined in the online auction.

25   61. An information medium for use in a capital market system, the information medium including thereon a computer program defining the processing steps of:

30       identifying a plurality of accredited investors;  
selecting one or more issuers offering unregistered securities;  
executing an online auction to enable the accredited investors to bid for shares of the issuers' unregistered securities; and  
distributing the shares of the issuers' unregistered securities to winning bidders for a price determined in the online auction.

62. An information transmission medium for use in a capital market system, the information transmission medium transmitting a computer program defining the processing steps of:
- identifying a plurality of accredited investors;
  - selecting one or more issuers offering unregistered securities;
  - 5     executing an online auction to enable the accredited investors to bid for shares of the issuers' unregistered securities; and
  - distributing the shares of the issuers' unregistered securities to winning bidders for a price determined in the online auction.
63. A method of operating a capital market system comprising
- 10     providing a secure communications network;
  - managing a pricing process to establish a final price for units of unregistered securities of an offering issuer, the pricing process including:
    - setting an initial offering price per unit for the unregistered securities, a
    - minimum number of units of the unregistered securities desired to be
    - 15     sold and a maximum number of units of the unregistered securities desired to be sold;
    - conducting an auction in which bids for the unregistered securities are received via the secure communications network during an initial offer period, wherein the bids are stated in dollar amounts or number of units;
    - 20     if the total number of dollars in all bids stated in dollars, divided by the offering price, plus the total number of units specified in all bids stated in units is no greater than the maximum number of units desired to be sold in the offering, determining the final price to be the offering price; otherwise determining the final price based on the auction.
- 25     64. The method of claim 63, wherein the step of conducting the auction includes:
- at each of a plurality of times during the auction, calculating an auction price that would result if no additional bids were received wherein the calculated auction price available via the communicating network.
65. The method of claim 63, wherein the auction includes:
- 30     an extension period such that the auction is not terminated until an elapse of a quiet period of a specified amount of time without any change in the allocation of shares in the auction.

66. The method of claim 65, wherein:

if no quiet period occurs during the first closing period of predetermined length, a second closing period is initiated possibly with a specified length of the quiet period shorter than the specified length of the quiet period in the first closing period.

5 67. The method of claim 63, wherein the step of calculating the auction price includes:

among all the prices bid, determining the highest price  $\underline{p}$  for which excess demand is not negative and determining the next highest bid price  $\bar{p}$  above  $\underline{p}$ ;

if excess demand at price per share  $\underline{p}$  is zero, determining that  $\underline{p}$  is the auction price;

otherwise, if excess demand at price  $\bar{p}$  is zero, determining that  $\bar{p}$  is the auction price;

10 otherwise, if excess demand is negative at price  $\underline{p}$  when those purchase bids

specifying  $\underline{p}$  as the maximum price are excluded, determining that  $\underline{p}$  is the auction price;

otherwise, if excess demand is positive at price  $\bar{p}$  when those sale bids specifying  $\bar{p}$  as the minimum price are excluded, determining that  $\bar{p}$  is the auction price;

15 otherwise, determining the auction price as the price between  $\underline{p}$  and  $\bar{p}$  such that excess demand is zero.

68. The method of claim 63, and further including the steps of:

allocating shares to all purchase bidders whose maximum prices are higher than the auction price;

20 allocating shares from all sale bidders whose minimum prices are lower than the auction price;

if excess demand is positive at the auction price, allocating shares from all sale bids specifying the auction price as the minimum price and allocating shares to purchase bids in priority order until no more shares remain;

25 if excess demand is negative at the auction price, allocating shares to all purchase bids specifying the auction price as the maximum price and allocating shares from sale bids in priority order until no more shares remain;

otherwise, allocating shares to all purchase bidders whose maximum prices are equal to the auction price and allocating shares from all sale bidders whose minimum prices are equal to the auction price.

69. The method of claim 68, wherein:

the priority rule favors bids received earlier in time.

70. A securities auction system for establishing a price per unit for units of securities, including:  
means for receiving bids for the securities, wherein the bids can state a total amount of money to be invested; and  
5 means for determining the price and allocating the securities in response to the bids.
71. A securities auction system for determining an auction allocation of securities, including  
means for conducting an auction in which bids are received for the securities;  
means for determining an auction allocation in response to the bids; and  
means for extending the auction until a predetermined period has elapsed during which  
10 the auction allocation has not changed.
72. A securities auction system including:  
means for conducting an auction in which bids are received for securities, and  
a current auction price is determined in response to bids; and  
means for making available the current auction price to bidders while the bids are  
15 accumulated.
73. A securities auction system, including:  
means for receiving bids and determining an auction allocation of securities in response to the bids; and  
means for notifying bidders when their bids are no longer included in the auction  
20 allocation.
74. A securities auction system, including:  
means for receiving bids and determining a current price and an auction allocation of securities in response to the bids, wherein the current price is a price at which a bidder must bid in order to be included in the auction allocation; and  
25 means for informing prospective bidders of the current price.
75. The system of claim 70, also including:  
means for conducting an auction to determine an auction allocation of the securities in response to the bids; and  
means for extending the auction until a predetermined period has elapsed during which  
30 the auction allocation has not changed.

76. The system of claim 72, also including:

means for conducting an auction to determine an auction allocation in response to the bids; and

5 means for extending the auction until a predetermined period has elapsed during which the auction allocation has not changed.

77. The system of claim 73, also including:

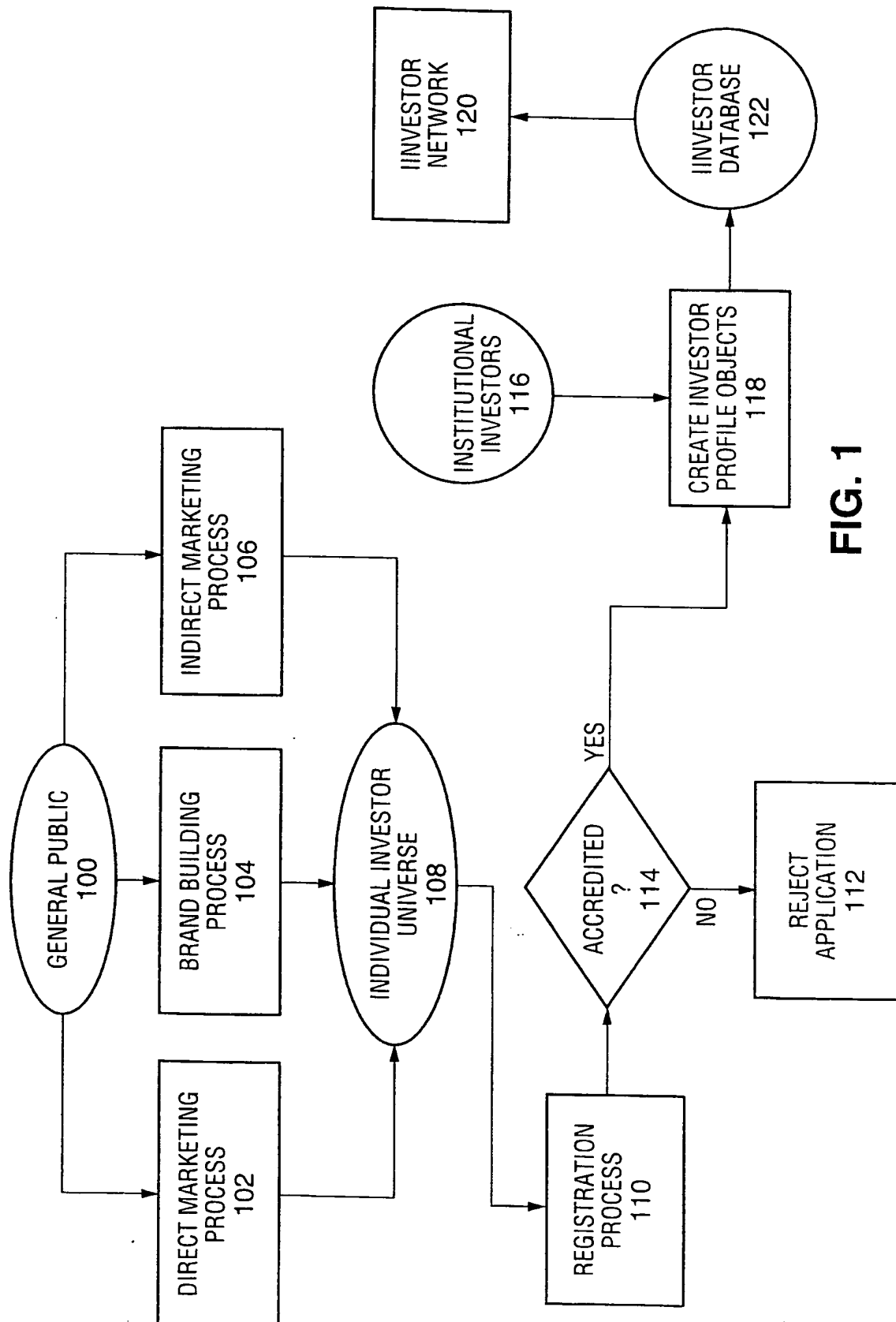
means for extending the auction until a predetermined period has elapsed during which the auction allocation has not changed.

78. The system of claim 74, also including:

10 means for extending the auction until a predetermined period has elapsed during which the auction allocation has not changed.



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**FIG. 1**

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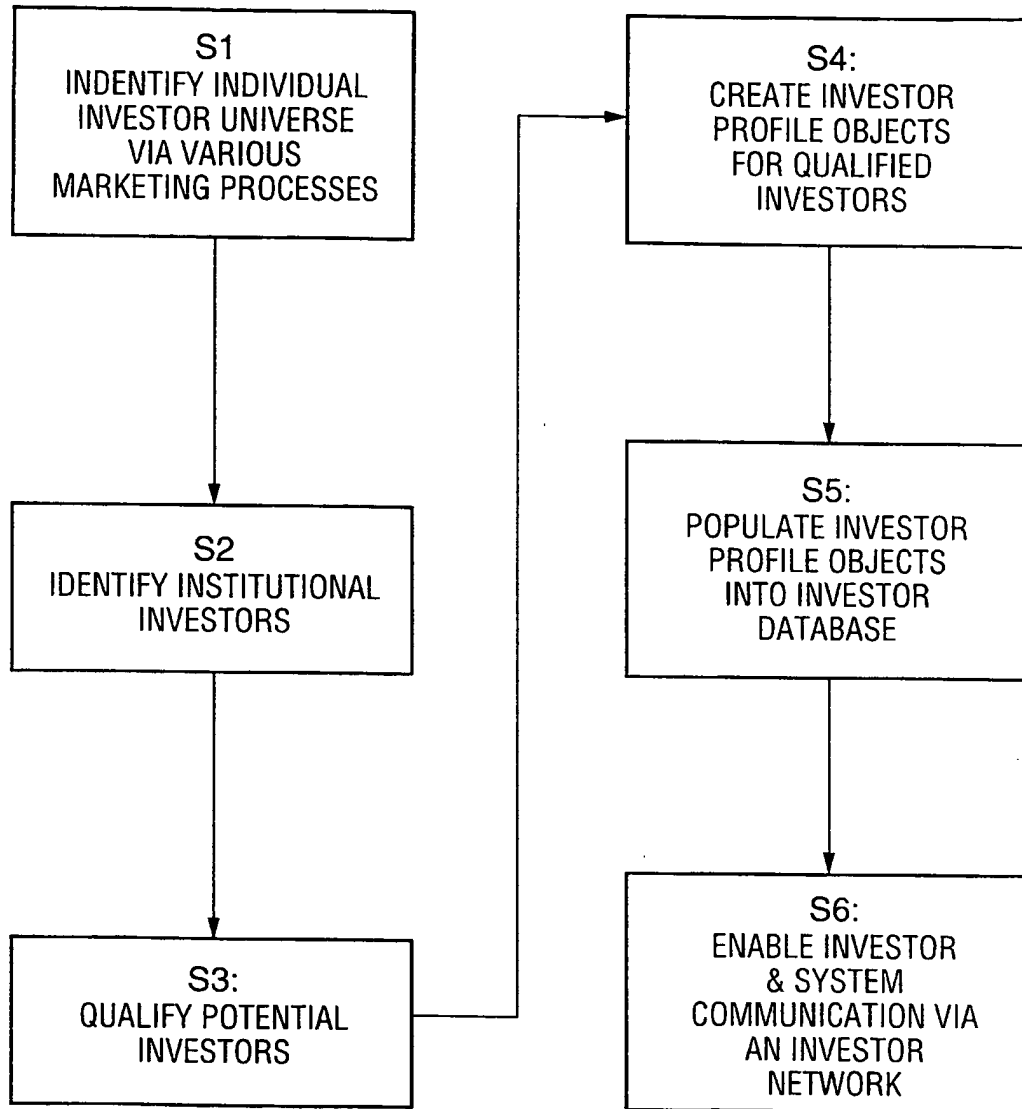
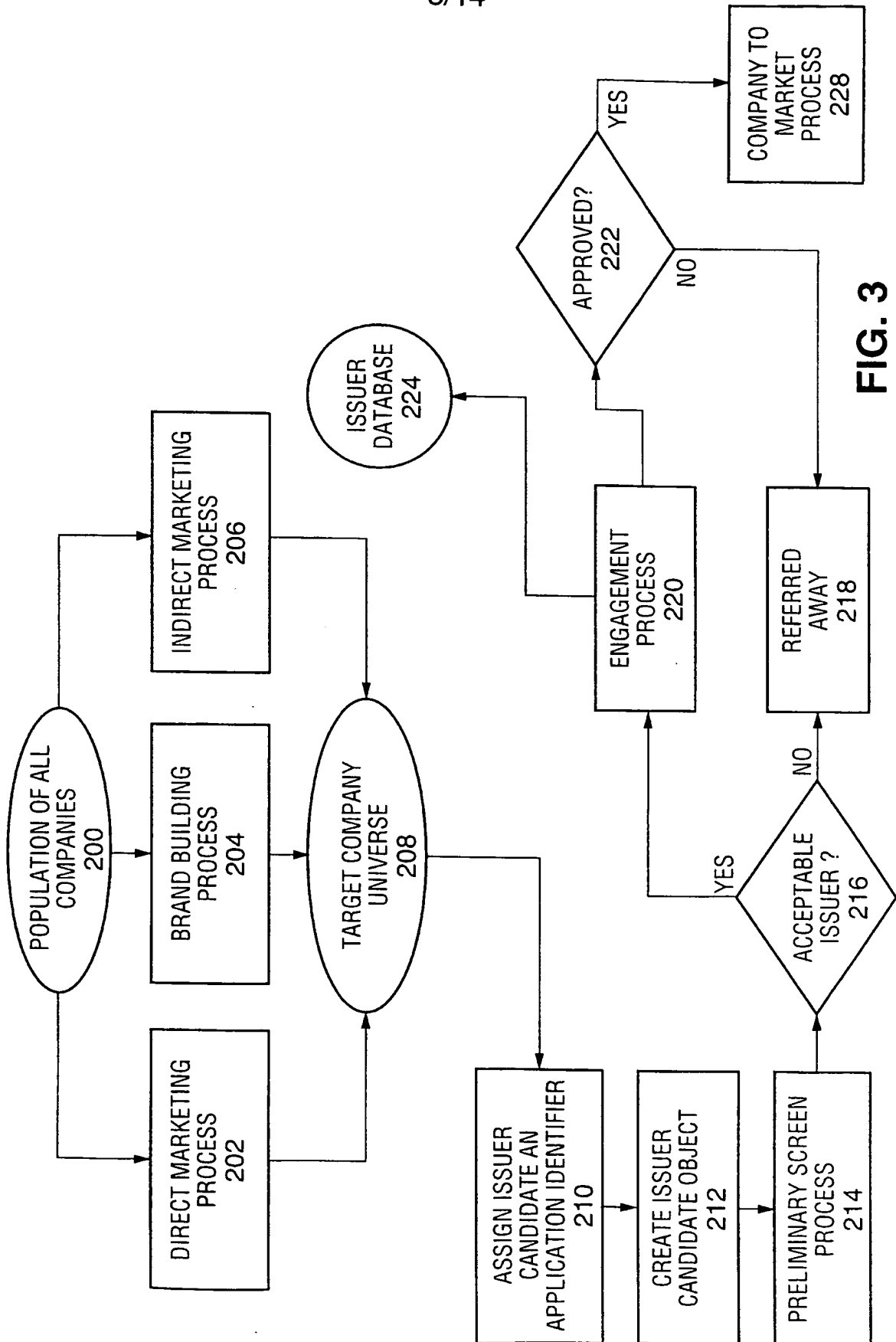


FIG. 2



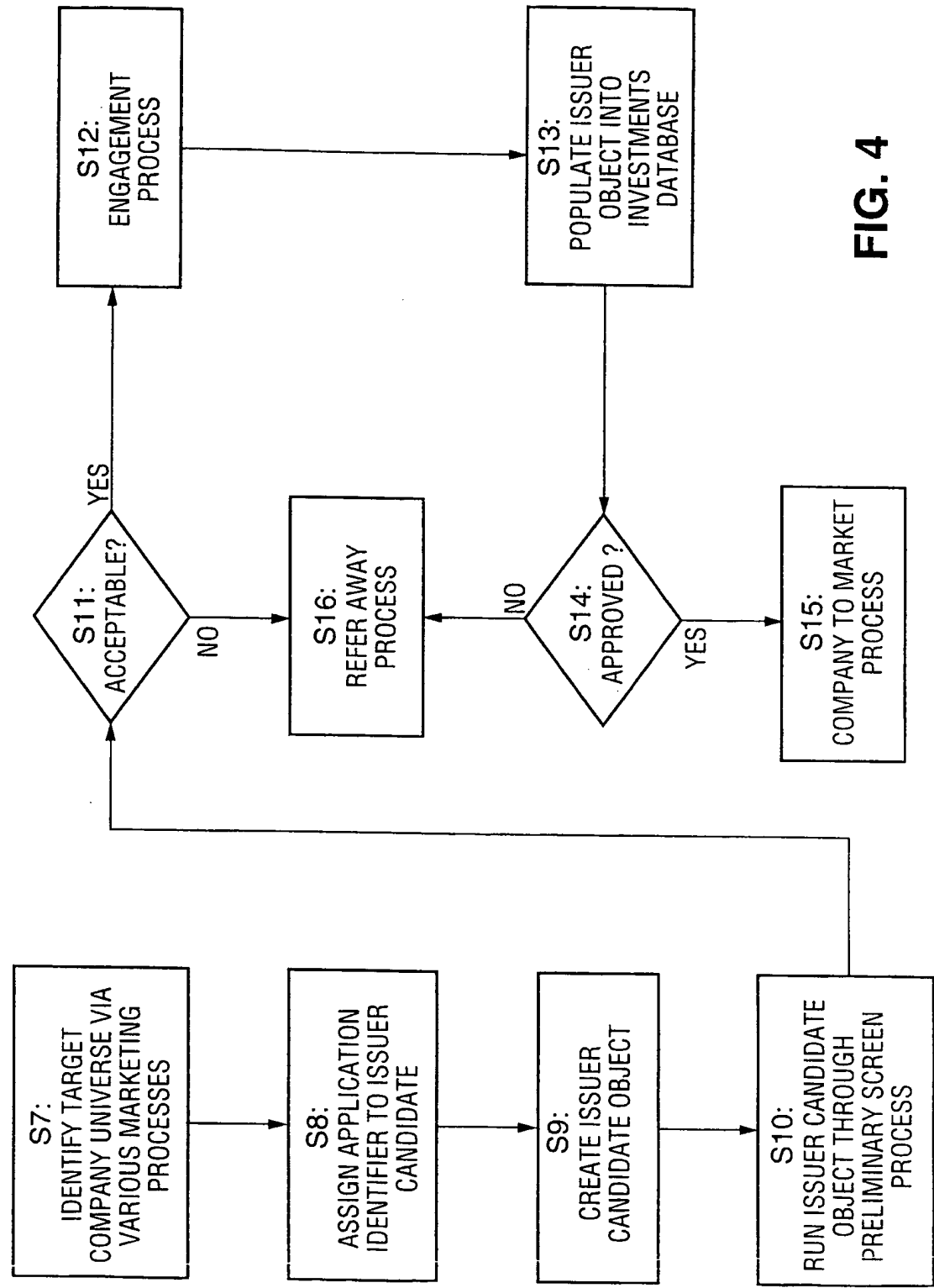
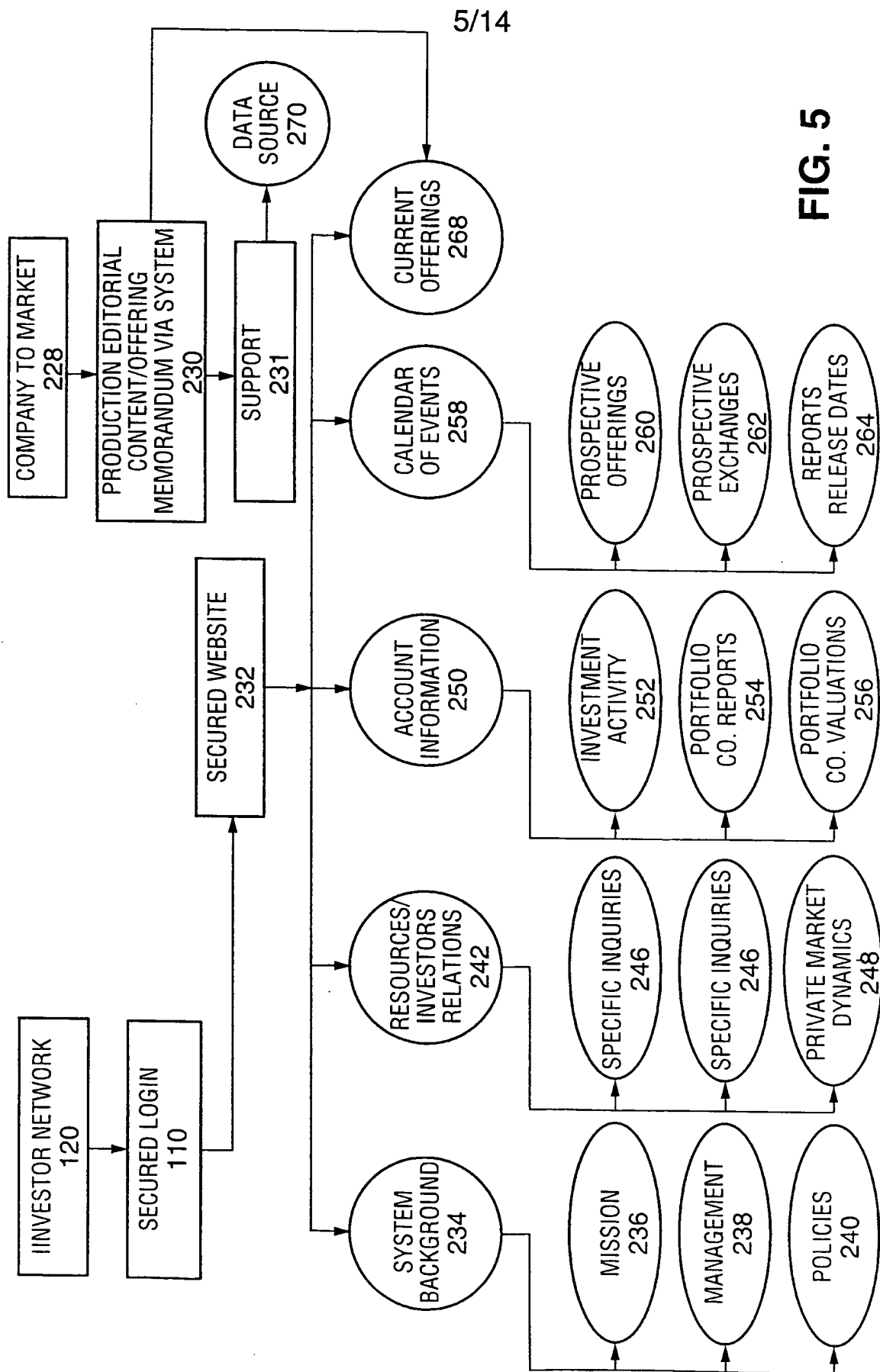
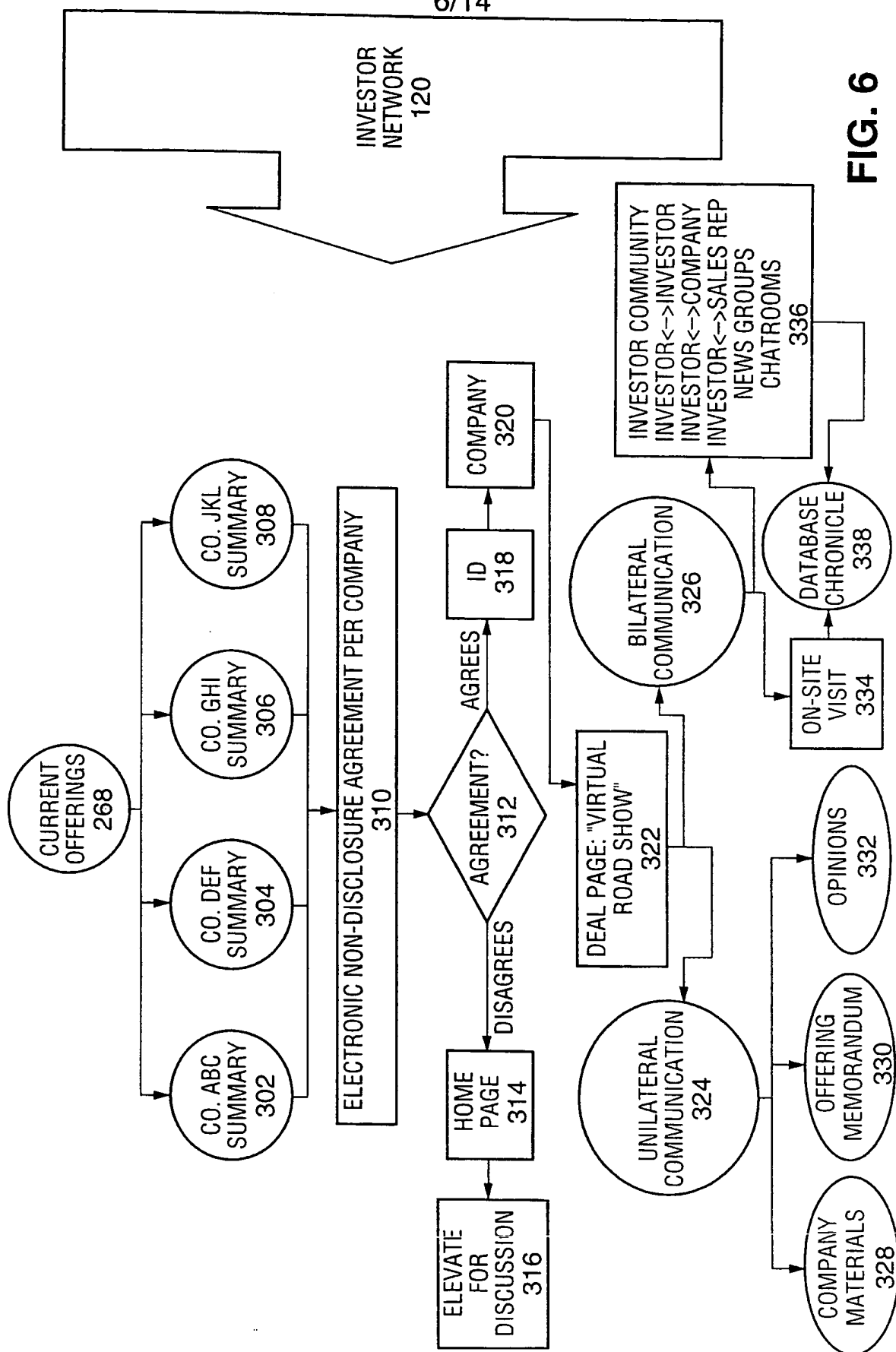


FIG. 4

**FIG. 5**

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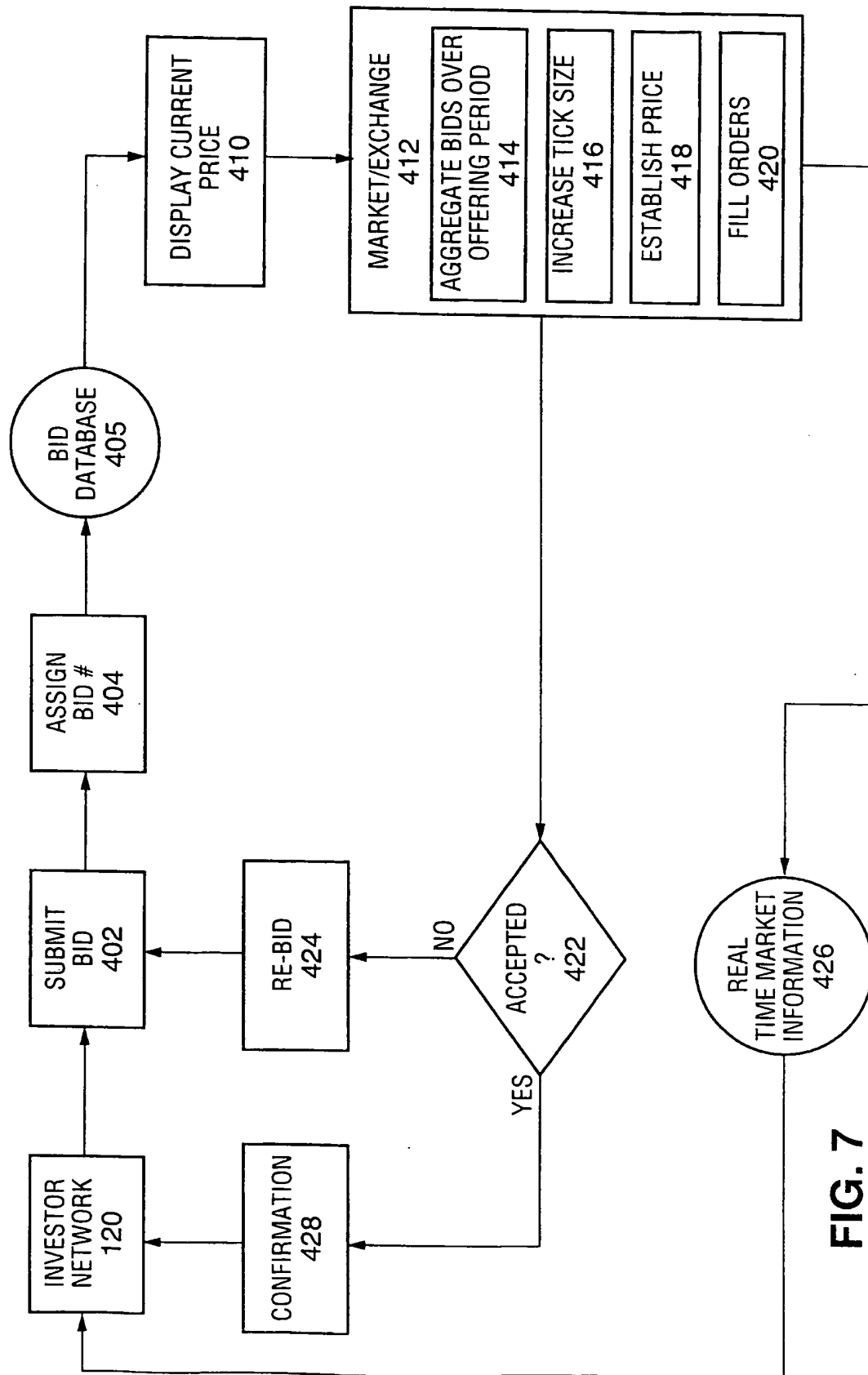


FIG. 7

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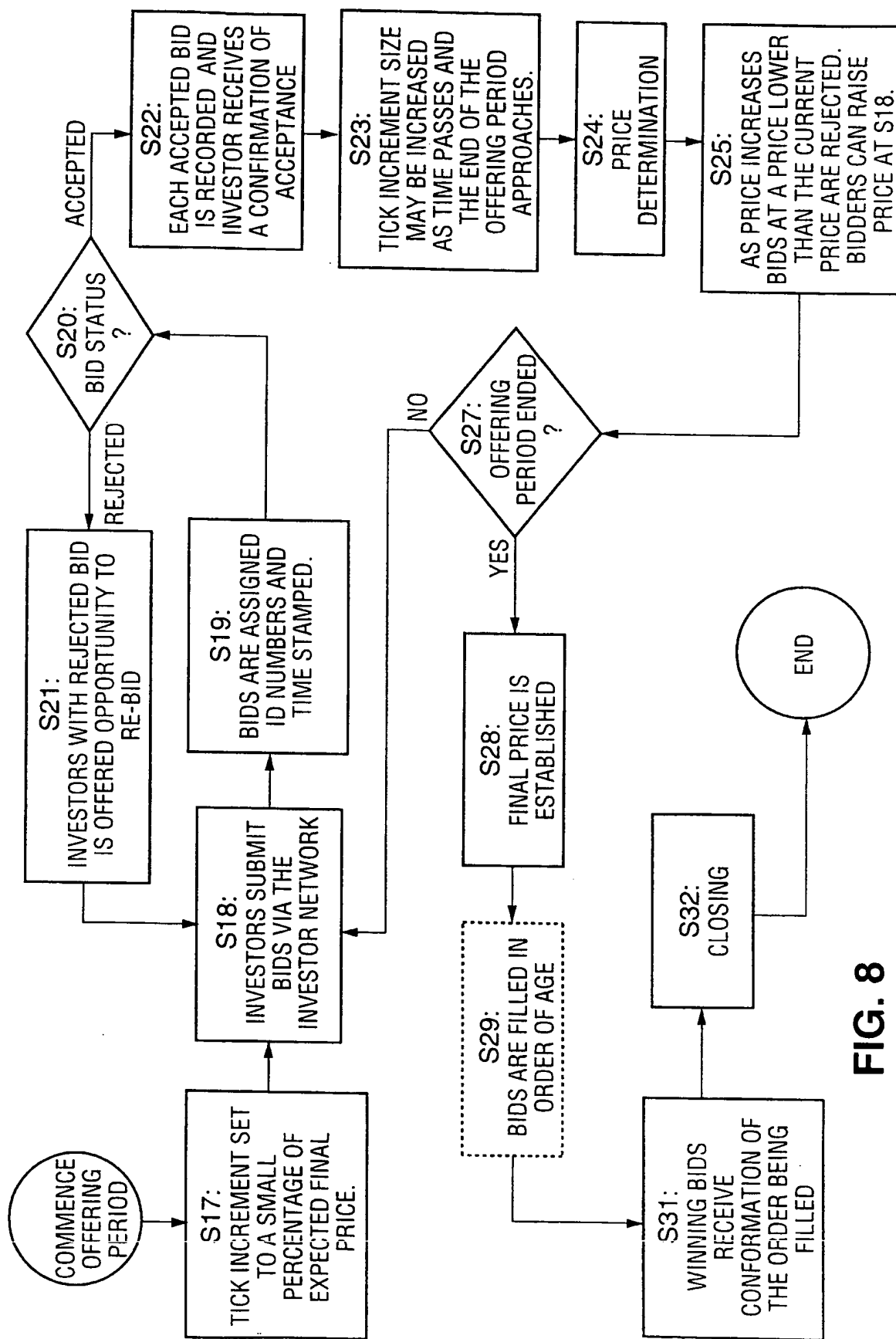


FIG. 8



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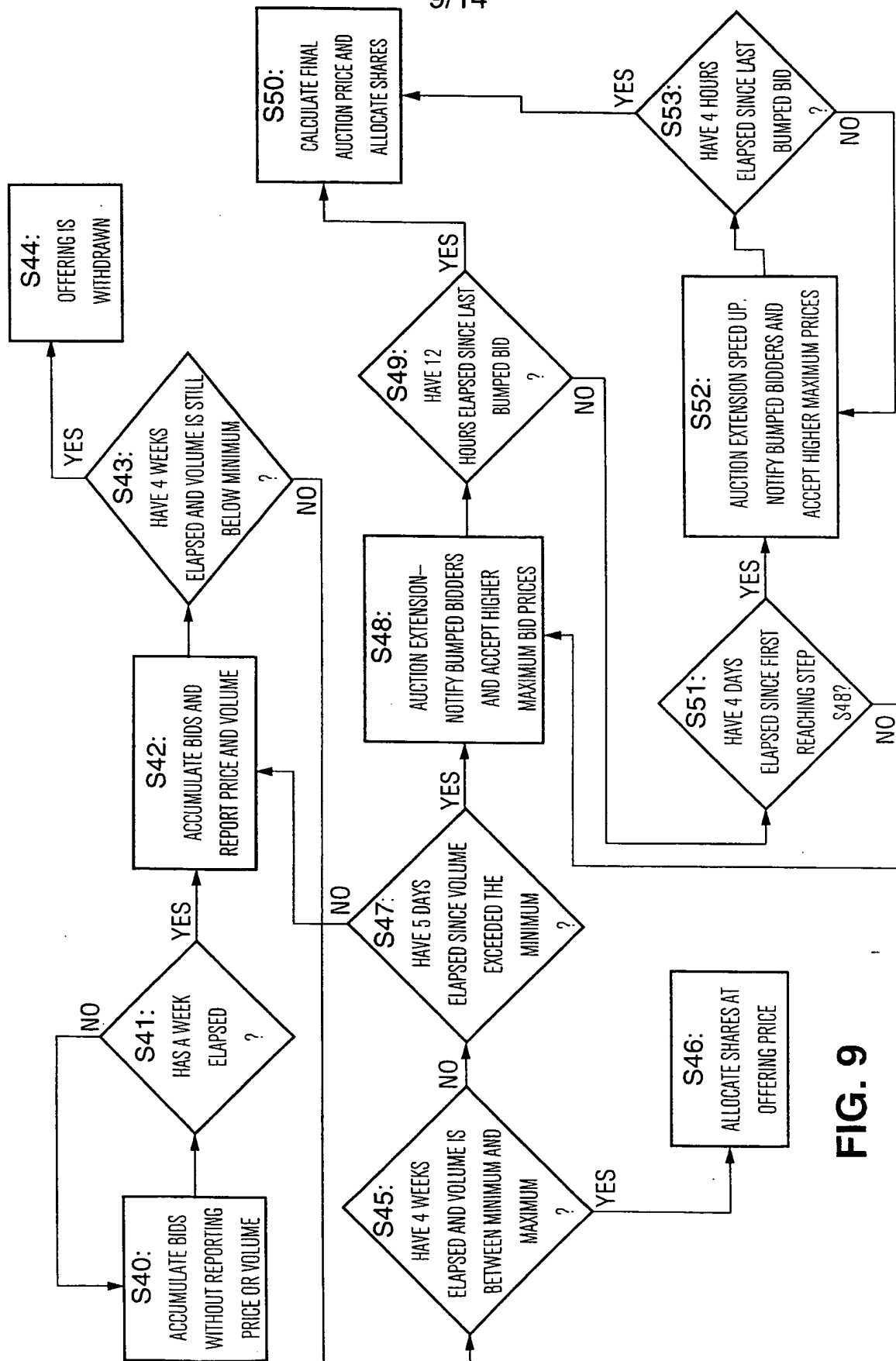


FIG. 9

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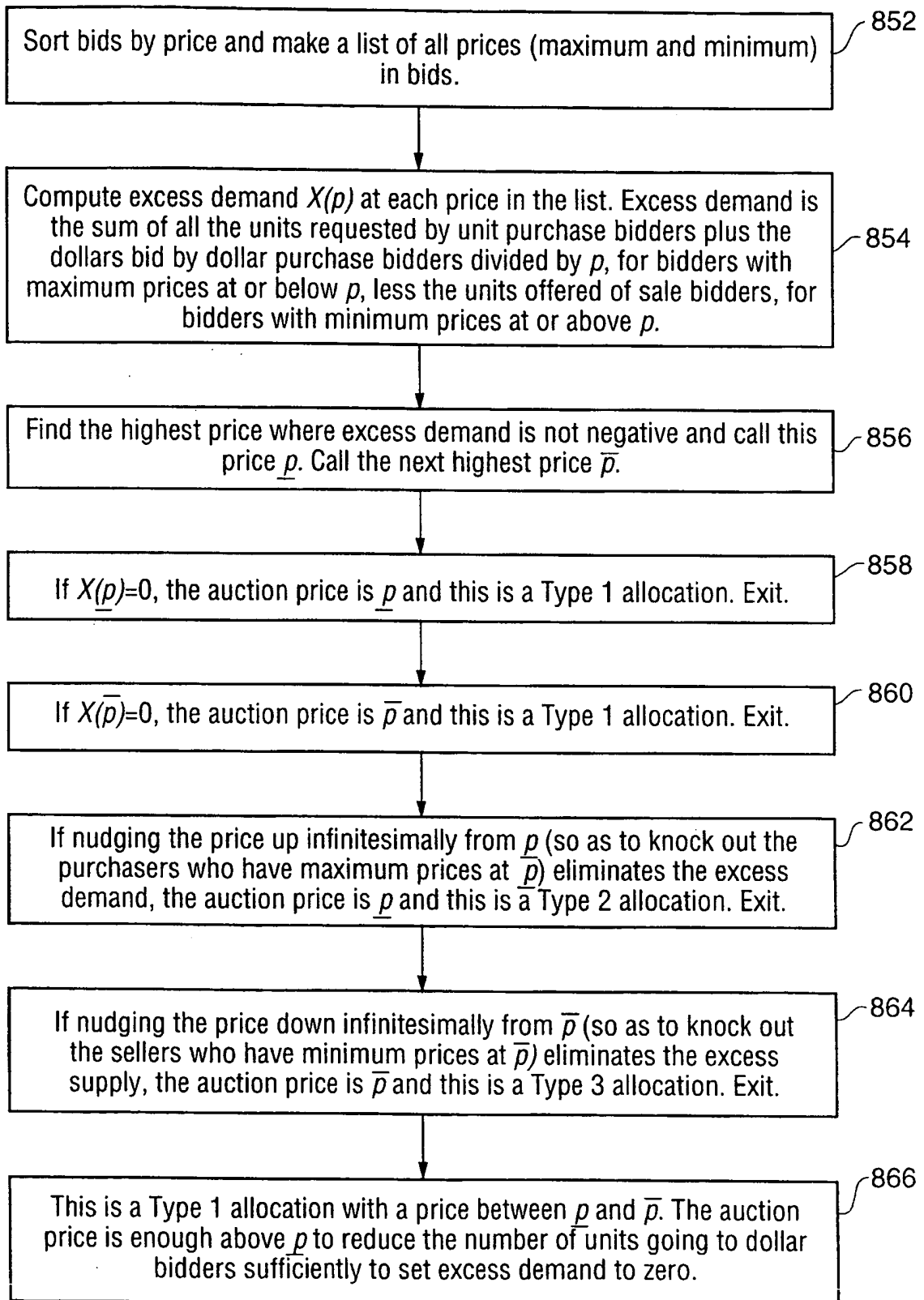


FIG. 10

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RULES FOR FILLING BIDS WITH MAXIMUM PURCHASE PRICES OR  
MINIMUM SALE PRICES EQUAL TO THE AUCTION PRICE

ALLOCATION TYPE	EXCESS DEMAND	PURCHASE BIDS	SALE BIDS
1	0	FILL ALL	FILL ALL
2	POSITIVE	FILL IN PRIORITY ORDER	FILL ALL
3	NEGATIVE	FILL ALL	FILL IN PRIORITY ORDER

FIG. 11

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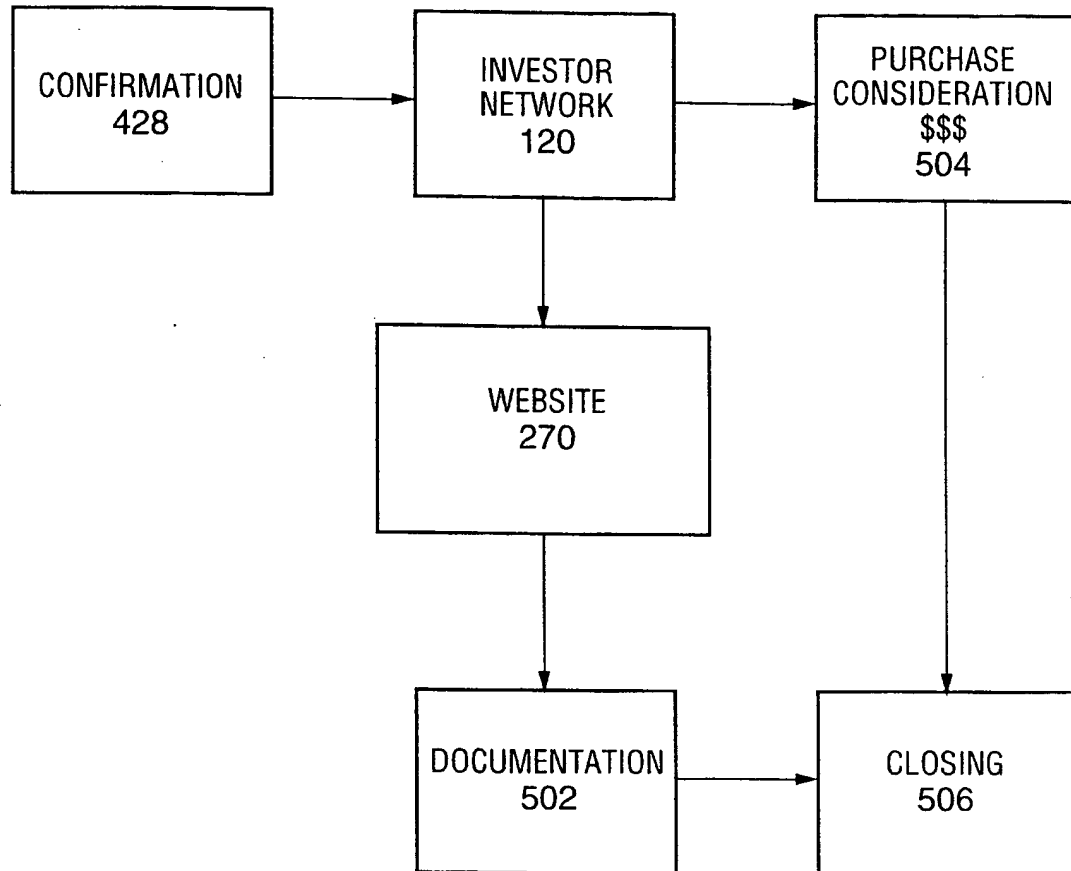


FIG. 12

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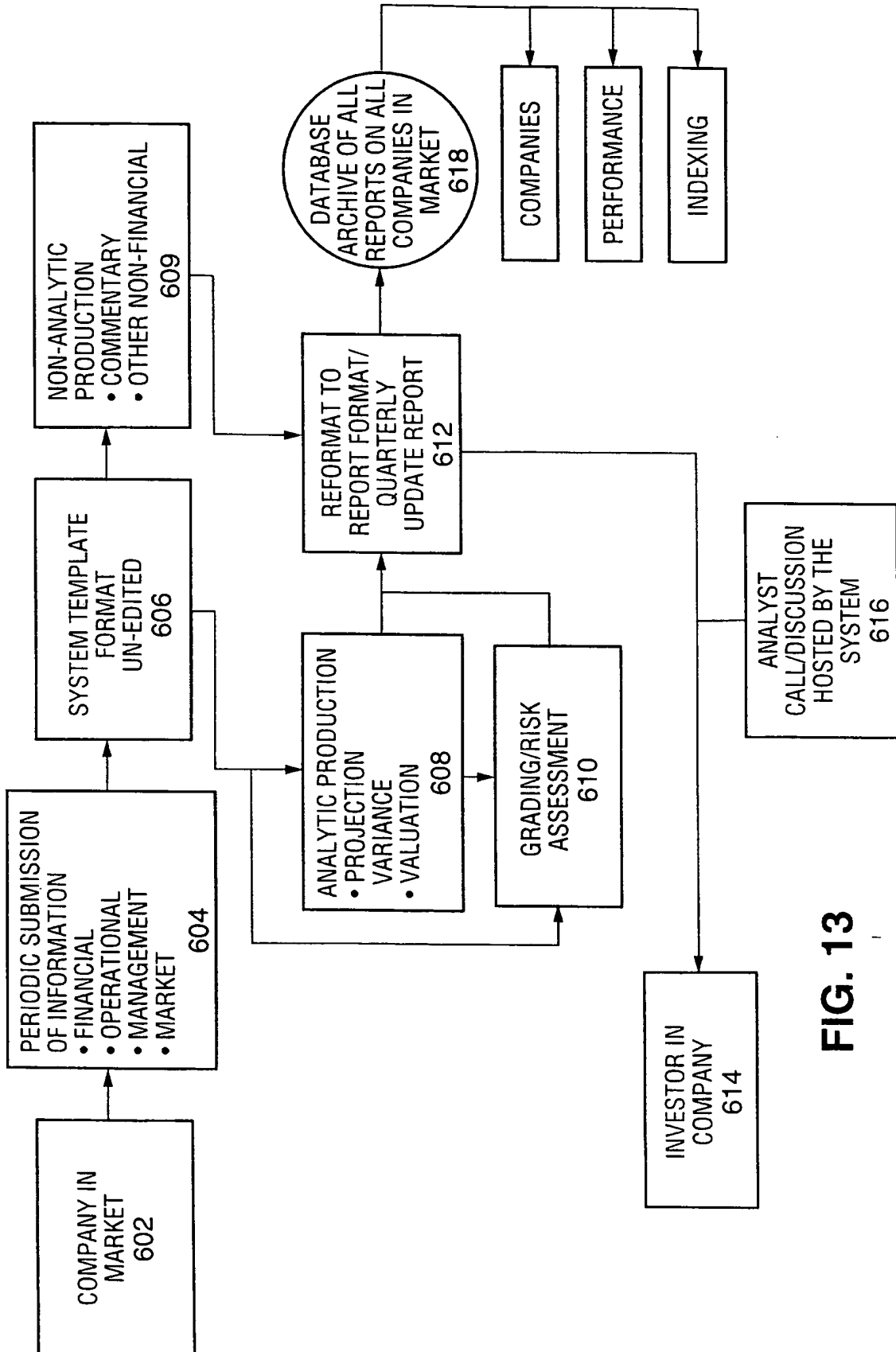


FIG. 13

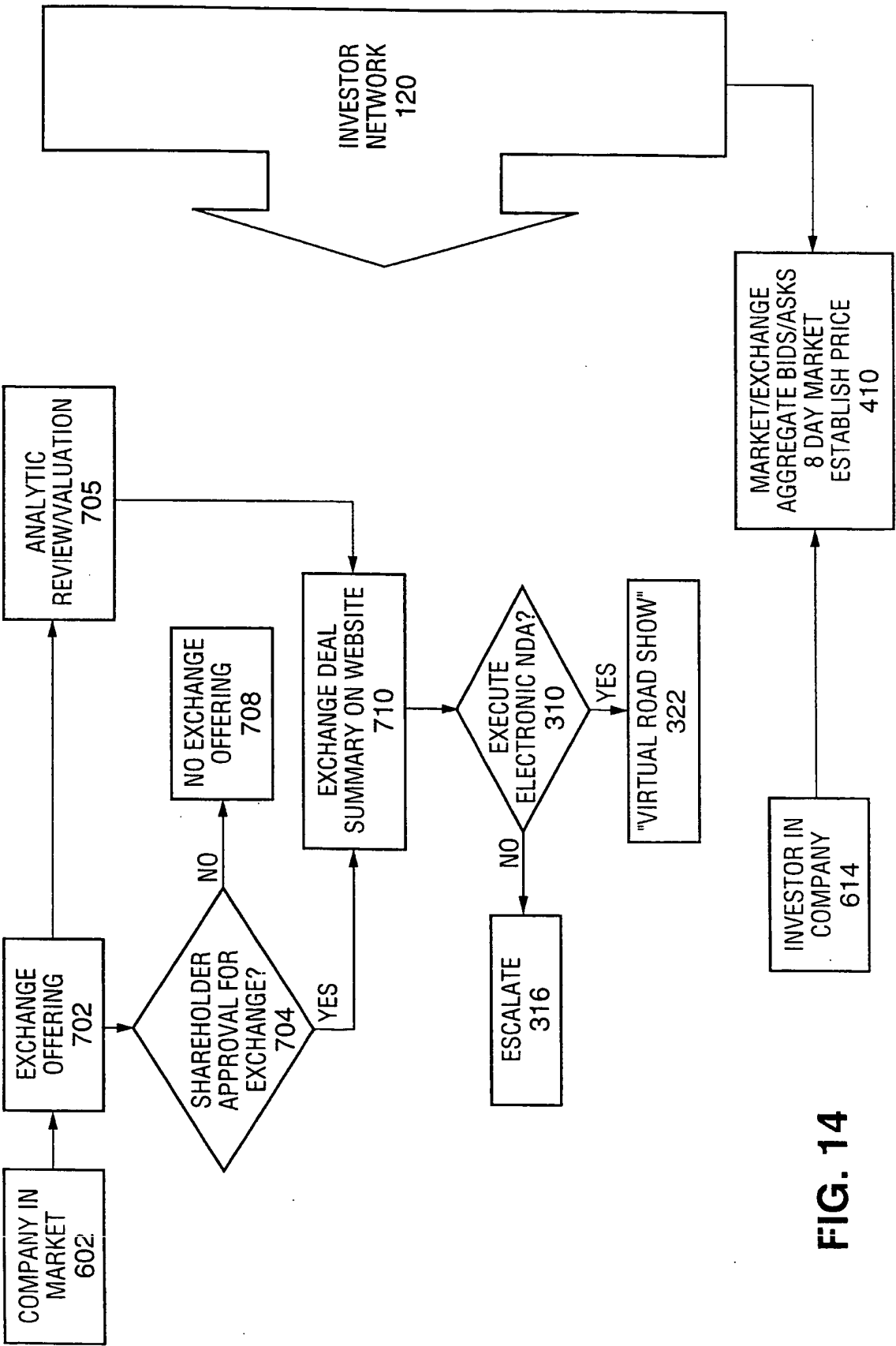


FIG. 14